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 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
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 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin

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 tgtatgtata agaataattc tgacagttag tgacccggag tctctggtgt 2700
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<210> 6
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 6
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 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys
 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110						115				120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125						130				135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
				245					250					

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

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 gtccggcgggt ctggcctagg gatcttcccc gttgccctt tggggcggga 200
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 gggttctcgc gagggccaga ctggtccatc cccatcttgg actttgtgga 300
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 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
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 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
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 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg Ile Ile Gln	Glu Arg Asn Gly Val	Leu Pro Asp Cys Leu Thr	155	160	165
Asp Gly Ser Asp	Val Val Ser Asp Leu	Glu His Glu Glu Met Lys	170	175	180
Ile Leu Arg Glu	Val Leu Arg Lys Ser	Lys Glu Glu Tyr Asp Gln	185	190	195
Glu Glu Glu Arg	Lys Arg Lys Lys Gln	Leu Ser Glu Ala Lys Thr	200	205	210
Glu Glu Pro Thr	Val His Ser Ser Glu	Ala Ala Ile Met Asn Asn	215	220	225
Ser Gln Gly Asp	Gly Glu His Phe Ala	His Pro Pro Ser Glu Val	230	235	240
Lys Met His Phe	Ala Asn Gln Ser Ile	Glu Pro Leu Gly Arg Lys	245	250	255
Val Glu Arg Ser	Glu Thr Ser Ser Leu	Pro Gln Lys Gly Leu Lys	260	265	270
Ile Pro Gly Leu	Glu His Ala Ser Ile	Glu Gly Pro Ile Ala Asn	275	280	285
Leu Ser Val Leu	Gly Thr Glu Glu Leu	Arg Gln Arg Glu His Tyr	290	295	300
Leu Lys Gln Lys	Arg Asp Lys Leu Met	Ser Met Arg Lys Asp Met	305	310	315
Arg Thr Lys Gln	Ile Gln Asn Met Glu	Gln Lys Gly Lys Pro Thr	320	325	330
Gly Glu Val Glu	Glu Met Thr Glu Lys	Pro Glu Met Thr Ala Glu	335	340	345
Glu Lys Gln Thr	Leu Leu Lys Arg Arg	Leu Leu Ala Glu Lys Leu	350	355	360
Lys Glu Glu Val	Ile Asn Lys		365		

<210> 9
 <211> 418
 <212> DNA
 <213> Homo sapiens

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 tgcacttctc ctottgcaaa gacccatata tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tgggtgatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
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 gaggaatatg accaggaa 418
 <210> 10
 <211> 22
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 10
 ttgacctata cagagattca tc 22
 <210> 11
 <211> 23
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 11
 ctaagaactt ccctcaggat ttt 23
 <210> 12
 <211> 40
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 12
 atgaagatca atttcaagaa gcatgcactt ctcctcttgc 40
 <210> 13
 <211> 2886
 <212> DNA
 <213> Homo sapiens
 <400> 13
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 tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 150
 cactagaagc tcttctgagg gaggtaatta aaaaacagtg gaatggaaaa 200
 acagtgctgt agtcatcctg taatatgctc cttgtcaaca atgtatacat 250
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 gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
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 cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

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 caattgtaca gcaaaggaaT ggacttttcc tgaagctaaa tggaacacca 850
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<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

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Thr	Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser
				20					25				30	
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40				45	
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55				60	
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70				75	
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85				90	
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100				105	
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
				110					115				120	

Ala Met Ala Val	Ile Phe Ser Asn Phe	Ser Ile Ile Thr Thr	Ala
125		130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg	Arg Leu Asn Trp Ile	Gln
140		145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu	Ser Ile Val Ala Leu	Thr
155		160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn	Leu Ala Gly Arg Gly	Phe
170		175	180
His His Asp Ala	Phe Phe Ser Pro Ser	Asn Ser Cys Leu Leu	Phe
185		190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn	Cys Thr Ala Lys Glu	Trp
200		205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr	Thr Ala Arg Val Phe	Ser
215		220	225
His Ile Arg Leu	Gly Met Gly His Val	Leu Ile Ile Val Gln	Cys
230		235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr	Asn Glu Lys Ile Leu	Lys
245		250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile	Phe Ile Gln Asn Ser	Lys
260		265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn	Gly Leu Thr Leu Gly	Leu
275		280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys	Asn Cys Gly Phe Phe	Tyr
290		295	300
Gly His Ser Ala	Phe Ser Val Ala Leu	Ile Phe Val Thr Ala	Phe
305		310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu	Lys Phe Leu Asp Asn	Met
320		325	330
Phe His Val Leu	Met Ala Gln Val Thr	Thr Val Ile Ile Thr	Thr
335		340	345
Val Ser Val Leu	Val Phe Asp Phe Arg	Pro Ser Leu Glu Phe	Phe
350		355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser	Ile Phe Ile Tyr Asn	Ala
365		370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala	Pro Arg Gln Glu Arg	Ile
380		385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu	Arg Ser Ser Gly Asp	Gly
395		400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro	Lys Ser Asp Glu Ser	Asp
410		415	420
Glu Asp Thr Phe			

<210> 15
 <211> 755
 <212> DNA
 <213> Homo sapiens

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 cttta 755

<210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 16
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<210> 17
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 17
 tcagagaatt ccttccagga 20

<210> 18
 <211> 40
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtgtg agtcacacctg taatatgctc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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gcggcctcgc gggcagagga gcatcccgtc taccaggtcc caagcggcgt 150

ggcccgcggg tcattggcaa aggagaaggc gccgagagcg gctccgcggc 200

ggggctgcta cccaccagca tctccaaagg cactgaacgc ccggcccagg 250

tgaagaaaga accgaaaaag aagaacaac agttgtctgt ttgcaacaag 300

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tcctctgcct catcatcctg tttgtgggcc gagcctggga tgccatcaca 450

gacccccctg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500

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<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
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 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val	Leu
110		115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly	Gln
125		130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val	Ala
140		145	150
Ser Gln Ser Ala	Asn His Thr His Gly	Thr Thr Ser His Arg	Glu
155		160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys	Ile
170		175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu	Gln
185		190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr	Phe
200		205	210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys	Leu
215		220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val	Glu
230		235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg	Asn
245		250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr	Leu
260		265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys	Lys
275		280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu	Ile
290		295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala	Val
305		310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu	Pro
320		325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys	Gln
335		340	345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr	Val
350		355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser	Thr
365		370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser	Gln
380		385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met	Ala
395		400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met	Tyr
410		415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
455

<210> 21
<211> 571
<212> DNA
<213> Homo sapiens

<400> 21
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
tatataatct gtgctgtcat cctgatcctg ggcgtgcggg agcagagaga 100
accctatgaa gccacgagc ctgagccaat cgcctacttc cggggcctac 150
ggctgtgtcat gagccacggc ccatacatca aacttattac tggcttcttc 200
ttcacctcct tggctttcat gctggtggag gggaactttg tcttggtttg 250
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctctgtgcca 300
tcattgtctc gccacttta accattccca tctggcagtg gttcttgacc 350
cggtttgga agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
atttctcatc ttggtggccc tcattggagag taacctcatc attacatag 450
cggtagctgt gccagctggc atcagtggtg cagctgcctt ctactaccc 500
tggctcatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550
cttccatgga accgagccca t 571

<210> 22
<211> 1173
<212> DNA
<213> Homo sapiens

<400> 22
ggggcttcgg cgccagcggc cagcgtctagt cggctctggta aggatttaca 50
aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
cattactgca gtaacactcc accatataga ccggcttta ccttatatca 250
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaacaagg 400
ctggccttgt acttggaata ctgagttggt taggaacttc tattgtggca 450

aacttcaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
taccttttgg atgggctcat tatatatgtt tgttcagacc atcctttcct 550
accaaatgca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctggtgtgg agtaagtgca cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa ggttatgtgc ttcacatgat cactactgca 750
gcagaatggt ctatgtcatt ttcttctttt ggttttttcc tgacttacat 800
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850
taacctctta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaagggtga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23
<211> 266
<212> PRT
<213> Homo sapiens

<400> 23
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu
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Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala
20 25 30
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
35 40 45
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
50 55 60
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
65 70 75
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
80 85 90
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
95 100 105
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
110 115 120
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

<400> 24
cggacgcttg ggcngcgcca gcggccagcg ctagtcggtc tggttaagtgc 50
ctgatgccga gttcgcgtctc tcgggtcttt tcttggtccc aggc aaagcg 100
gagcggagat cctcaaacgg cctagtgcct cgcgcttcgc gagaaaatca 150
gcgggtctaataattcctct gggttggtga agcaggtacc aagaatcttc 200
aaccccttcc cacaaaagct aattgagtag acgttctctg tgagtacacg 250
ttcctgttga ttacaaaaag gtgcagggtat gaggcaggct gaagactaac 300
attttgtgaa gttgtaaaac agaaaacctg ttgaaatgt ggtggtttca 350
gcaaggcctc agtttcttc cttcagcctt tgtaatttgg acatctgctg 400
ctttcatatt ttcatacatt actgcagtaa cactocacca tatagaccgg 450
gttttacctt atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtg tttcagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgcgcg tgcgtcccg agtcaagtg agcttctcgg 50
ctgccccgcg ggcgggggtg cggagccgac atgcgccgcg ttctcggcct 100
ccttctggct ttgcgcggct gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgcctcg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgcccta cctctacaaa cagggtcttg ccatcccccg ctccagcttc 350
ctgaatgttt tagctgtgac cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcg tggtgtccac atgctgtctac ctgctctcca 450
gtattttttg caaacagttg gtggtgtcct acttctctga taaagtggcc 500
ctgctgcaga gaaagggtga ggagaacaga aacagcttgt ttttttctt 550
attgtttttg agacttttcc ccatgacacc aaactgggtc ttgaacctct 600
cggccccaat tctgaacatt cccatcgtgc agttcttctt ctcaagtctt 650
atcggtttga tcccatataa ttcatctgt gtgcagacag ggtccatcct 700
gtcaacccta acctctctgg atgctctttt ctctcgggac actgtcttta 750
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tatacacagt agaaaagaca catgatctgg attttctggt tggccatccc 900
ctggactcag ttgcttattt gtgtaatgga tgtggctctc taaagccctc 950
cattgttttt gattgccttc tatagggtgat gtggacactg tgcataatg 1000

1997-98

<211> 264

<213> Homo sapiens

Met Arg Pro Leu Leu Gly Leu Leu Val Phe Ala Gly Cys Thr
1 5 10 15

Leu Gly Ser Thr Glu Glu Ala Gly Gly Arg Ser Leu Trp Phe Pro
35 40 45

Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
65 70 75

Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
80 85 90

Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
95 100 105

Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
110 115 120

Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
125 130 135

Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
140 145 150

Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
155 160 165

Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
170 175 180

Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
185 190 195

Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
200 205 210

Thr Ser Leu Asp Ala Leu Phe Ser Trp Asp Thr Val Phe Lys Leu
 215 220
 Leu Ala Ile Ala Met Val Ala Leu Ile Pro Gly Thr Leu Ile Lys
 230 235 240
 Lys Phe Ser Gln Lys His Leu Gln Leu Asn Glu Thr Ser Thr Ala
 245 250 255
 Asn His Ile His Ser Arg Lys Asp Thr
 260

<210> 29
 <211> 1292
 <212> DNA
 <213> Homo sapiens

<400> 29
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 gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
 ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
 tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
 tcagagactg ttgatttggt gagacagacc ggccatcagt gtggcatgtc 250
 agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
 ctccagagacc ccccccgcag taccctctcc ttatagtgtg gtataagggt 350
 ctgcacaact tgggattaat cttgctcact gcctactttg tgattcaacc 400
 tttcagccca ttagcacctg agccagtgtc ttctggagct cacacctggc 450
 gctcaactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
 tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
 accctttcca gactttgacc cctgggtggac aaacgactgt gaggagaatg 600
 agtcagagcc cattctgcc aactgcactg gctgtgcca gaaacacctg 650
 aaggtgatgc tcttggaaga cgccccaagg aaatttgaga ggctccatcc 700
 actggtgatc aagacgggaa agccctgtt ggaggaagag attcagcatt 750
 ttttgtgcca gtaccctgag gcgacagaag gcttctctga agggtttttc 800
 gccaaagtgtt ggcgctgett tctgagcgg tggttcccat ttccttatcc 850
 atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctcg 900
 ttttcaactca cctgccattt ccaaagatg cctctttaa caagtgtccc 950
 tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
 cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
 tccagtcgag aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
 gatatcggt atgtcgacac caccactgg aaggtctacg ttatagccag 1150

aggggtccag cctttggtca tctgcatgg aaccgctttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagccga aaaccaggtt 1250
 gaaaggggaa aaataaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345
 Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
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 gcccgagggg cgcgagcccc gcataaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cactgtgttt ccgaactgcc 150
 agctcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgtgcgcaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggtttctgc aaccttggga 400
 ttaattcttc tcactgccta ctttgtgatt caacctttca gcccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacggtgc cgcacacgct tocggtgaa cacctcttct ttggagtcag 50
 ccactgatga ggcagggtcc ccacttgag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcttatgag ccggtggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccacacctt tttgaagact tccaggcttt ttgtgccaca 250

ccggaatggc gccacttcat cgacaaacag gtacagccaa ccattgtccca 300
gttcgaaatg gacacgtatg ctaagagcca cgacottatg tcaggtttct 350
ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
gagcgcgccc agagtcgtcg ggccttccag gagctggtgc tggaacctgc 450
gcagaggcgg gcgcgcctgg aggggctacg ctacacggca gtgctgaagc 500
agcaggcaac gcagcactcc atggccctgc tgcactgggg gcgctgtgg 550
cgccagctcg ccagcccatg tggggcctgg gcgctgaggg aactcccat 600
cccccgctgg aaactgtcca gcgcgagac atattcacgc atgctgtcga 650
agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgtcttc 700
cgagacaatc tgggtgaggt tccctgaca cccacgagg aggcctcact 750
gcctctggca gtgaccaaag aggocaaagt gagacccca cccgagtgc 800
tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagacccc 850
atggaggcag cagaactgga tgcgcagcgt gagaagctgg tgcgtgcgc 900
cgagtgcgag ctggtgacgg tagtgccctg ggtccaggg ctgctggagg 950
tcaccacaca gaattgtatac ttctacatg gcagcactga gcgcgtggaa 1000
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tgagggtccac ctgcggcgtt tcaacctgcg ccgttcacga cttgagctct 1100
tctttatcga tcaggccaac tacttctcga acttccatg caaggtgggc 1150
acgacccagc tctcatctcc tagccagact ccgagacccc agcctggccc 1200
catccacccc cataccagg tacggaacca ggtgtactcg tggctcctgc 1250
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atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatctc 1350
caacttcgag tacttgatgc aactcaacac cattgcgggg cggaacctca 1400
atgacctgtc tcagtacct gtgttccctt gggctcctga ggactacgtg 1450
tccccaaacc tggacctcag caaccagcc gtcttcggg acctgtctaa 1500
gcccatcggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
atgaaagctt tgaggaccca gcagggaacca ttgacaagtt ccaatatggc 1600
accactact ccaatgcagc aggcgtgatg cactacctca tccgctggga 1650
gccttcaccc tccctgcacg tccagctgca aagtggccgc tttgactgct 1700
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cttccgtgag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900
gacttcaccc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
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cagccgcga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
gctgtagacc tggaccatgt gacagatgag cgggaacgga aggtcttgga 2100
gggcattatc agcaactttg ggagactcc ctgtcagctg ctgaaggagc 2150
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attcttcgca gaggtgactg tgaagtccag tgggtgctg ggcaccacaca 2300
gctgtgtgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
gacccacaca tgggcagcca caagacgcag cgactgctga gtggcccggtg 2400
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gcactacccc gtggcaagct gttgagccag ctcagctgcc acctgatgt 2550
agtaacctgc cttgcactgg acacctgtgg catctacctc atctcaggct 2600
cccgggacac cacgtgcatg gtgtggcgcc tcctgcatca ggggtgtctg 2650
tcagtaggcc tggcaccaaa gcctgtgcag gtccgtgatg ggcagggggc 2700
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gatctgagga tggaaactgtg atcatacaca ctgtacgccg cggacagttt 2800
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gtggccatcc gcagcgtggc cgtgaccaag gagcgcagcc acgtgtggt 3150
gggcctggag gatggcaagc tcacgtgtgt ggtgcgggg cagccctctg 3200
aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctcgcggcgc 3250
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ctgaacctgg ccagtcgggc tgctcgggcc ccgcccccg caggcctggc 3350
cggggaggcc ccgcccagaa gtcggcggga acaccccggg gtgggcagcc 3400
caggggggtg gcggggccca ccctgcccag ctcagggatt ggcggggcat 3450

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly Ala Val Asp	Leu Asp His Val Thr	Asp Glu Arg Glu Arg Lys
590	595	600
Ala Leu Glu Gly	Ile Ile Ser Asn Phe	Gly Gln Thr Pro Cys Gln
605	610	615
Leu Leu Lys Glu	Pro His Pro Thr Arg	Leu Ser Ala Glu Glu Ala
620	625	630
Ala His Arg Leu	Ala Arg Leu Asp Thr	Asn Ser Pro Ser Ile Phe
635	640	645
Gln His Leu Asp	Glu Leu Lys Ala Phe	Phe Ala Glu Val Thr Val
650	655	660
Ser Ala Ser Gly	Leu Leu Gly Thr His	Ser Trp Leu Pro Tyr Asp
665	670	675
Arg Asn Ile Ser	Asn Tyr Phe Ser Phe	Ser Lys Asp Pro Thr Met
680	685	690
Gly Ser His Lys	Thr Gln Arg Leu Leu	Ser Gly Pro Trp Val Pro
695	700	705
Gly Ser Gly Val	Ser Gly Gln Ala Leu	Ala Val Ala Pro Asp Gly
710	715	720
Lys Leu Leu Phe	Ser Gly Gly His Trp	Asp Gly Ser Leu Arg Val
725	730	735
Thr Ala Leu Pro	Arg Gly Lys Leu Leu	Ser Gln Leu Ser Cys His
740	745	750
Leu Asp Val Val	Thr Cys Leu Ala Leu	Asp Thr Cys Gly Ile Tyr
755	760	765
Leu Ile Ser Gly	Ser Arg Asp Thr Thr	Cys Met Val Trp Arg Leu
770	775	780
Leu His Gln Gly	Gly Leu Ser Val Gly	Leu Ala Pro Lys Pro Val
785	790	795
Gln Val Leu Tyr	Gly His Gly Ala Ala	Val Ser Cys Val Ala Ile
800	805	810
Ser Thr Glu Leu	Asp Met Ala Val Ser	Gly Ser Glu Asp Gly Thr
815	820	825
Val Ile Ile His	Thr Val Arg Arg Gly	Gln Phe Val Ala Ala Leu
830	835	840
Arg Pro Leu Gly	Ala Thr Phe Pro Gly	Pro Ile Phe His Leu Ala
845	850	855
Leu Gly Ser Glu	Gly Gln Ile Val Val	Gln Ser Ser Ala Trp Glu
860	865	870
Arg Pro Gly Ala	Gln Val Thr Tyr Ser	Leu His Leu Tyr Ser Val
875	880	885
Asn Gly Lys Leu	Arg Ala Ser Leu Pro	Leu Ala Glu Gln Pro Thr
890	895	900

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg
995 1000

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50

atcatgcaac cccacggccc accttgtgaa ctctcgtgc ccagggtgta 100

tgtgogtctt ccagggttac tcatccaaag gcctaatacca acgttctgtc 150

ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200

ggtactggcc ctgggccaat gcgtcctgc tggagccttt gcctccttct 250

actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300

gccttcaccc gcacactccg ttaccacact gggtcatttg catttggagc 350

cctcatcctg acccttgtgc agatagcccg ggatcatctg gagtatattg 400

accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450

tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500

ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550

cagccaaaaa tgcgttcctg ctactcatgc gaaacattgt cagggtggtc 600

gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt tttttctcc ggtcgcaccc 700
 cggggcgtgg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacogcca gcggcttctt 800
 cagcgttttc ggcattgtgt tggacacgct ctccctctgc ttccctggaag 850
 acctggagcg gaacaacggc tccttggaacc ggcctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgacagc tcgggccctg atccaggact gcacccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggtcacgc ctgtaatcca 1100
 acactttgag aggctgagcg gggcggatca cctgagtcag gatttcgaga 1150
 ccagcctggc caacatgggt aaacctccgt ctctattaaa aatacaaaaa 1200
 ttagccgaga gtgggtggcat gcacctgtca tcccagctac tcgggagggt 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaacaa acaaaaagat ttatttaaag atatattgtt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
 1 5 10 15
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 37

tcgtgccag gggctgatgt gc 22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

gtctttaccc agccccggga tgcg 24

<210> 39

<211> 50

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 39
 ggcctaatacc aacgttctgt cttcaatctg caaatctatg gggctcctggg 50

 <210> 40
 <211> 1365
 <212> DNA
 <213> Homo sapiens

 <400> 40
 gagtcttgac gcgcgccggg ctcttggtag ctcagcgga gcgccaggcg 50
 tcggccgccg gtggtatgt tcgtgtccga tttccgcaa gagttctacg 100
 aggtggtcca gagccagagg gtcccttctc tcgtggcctc ggacgtggat 150
 gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
 gcaatatacg ctggttcacg tttctgggtg gcaagaactt gaaactgcat 250
 ttcttgagca taaagaacag ttctattatt ttattctcat aaactgtgga 300
 gctaattgtg acctattgga tattcttcaa cctgatgaag acactatatt 350
 ctttgtgtgt gactccata ggccagtcaa tgcgtcaat gtatacaacg 400
 ataccagat caaattactc attaaacaag atgatgacct tgaagttccc 450
 gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
 aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
 aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
 gcccgagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
 gacatcgtca gccatggtga tgtttgagct ggcttgtagt ctgtccaagg 700
 acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
 gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
 gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
 cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900
 gtgtcttacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
 taccgcagcc aggttcaagc tgtgtctgtg gcattggacag aagcggctcc 1000
 aggagttcct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
 ttccaggcca tggacatctc cttgaaggag aatttgccgg aaatgattga 1100
 agagtctgca aataaatttg gcatgaagga catgcgctg cagactttca 1150
 gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttcatgga gagccccgag aaggatggct caggacaga 1250
 tcatctcatc caggctcttg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccagaagc agctgcgagc caccagcag 1350
 accattgcca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacotcagc gcgagcgcca ggcgtccggc cgccgtggct atgntcgtgt 50
 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcott 100
 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggcttctgtc cagtgtgacc angtgcaata tangctggtt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttatto tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttcgcaaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgta 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
 caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
 tttctagtga accacgaagg gacgatacca gaaaacaccc tcaacccaaa 100
 ggaaatagac tacagcccca attggctgac ttggctata gaaaaagaa 150
 aggaacgaaa agagacagtt ttttttgaa agctaagtct tccctttatc 200
 gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
 gtaaagtacg ctccggtcac catggtgaca gcgcgccctg gtcccgctcg 300
 ggcagcgctc ctgctcttcc tctgatgtg tgagatccgt atgggtggagc 350
 tcacctttga cagagctgtg gccagcggct gccaacgggt ctgtgactct 400
 gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctcggcccg 450
 cccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
 aggggtgaca aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
 agggagggtc cccaagggga gcctggccct cagggcagca aggggtgaca 600
 gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
 tctcagtggt ccgcaagacg gcctgcaca gcggcgagga cttccagacg 700
 ctgctcttcg aaagggctct tgtgaacctt gatgggtgct ttgacatggc 750
 gaccggccag tttgctgctc ccctgcgtgg catctacttc ttcagcctca 800
 atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
 cagaaagagg ctgtcatcct gtacgcgcag cccagcgagc gcagcatcat 900
 gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
 tgcggtcttt caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
 gacacctaca tcaccttcag cggccacctc atcaaggcgg aggcagactg 1050
 agggcctctg ggccaccctc ccggctggag agctcagggt ctggctcccg 1100
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 tccccgggga cctggcattc tggggagacc ctgcttctat cttggctgcc 1200
 atcatccctc ccagcotatt tctgctcctc tcttctctct tggacctatt 1250
 ttaagaagct tgctaacctc aatattctag aactttccca gcctcgtagc 1300
 ccagcacttc tcaaaccttg aaatgcacgc gaatcaccgg gggttcgtgt 1350
 taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
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tggagcaacc aggttctagg actttctcaa tattctagta cttttcgaac 1500
 attctggaat cctccccaca ttctagaatt ctcccacat ttttttttct 1550
 tgagacagag tcttgctctg ttgccaggcg tagagtgcag tgggtcaatc 1600
 tcagttcact gcaacctctg cctcccggtg tcaagcgatt cttctgcctc 1650
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 tgggattaca ggtgtgagcc accgtgcctg gccaatcca acattcttaa 1850
 attctctcat cctccaggg ctcccgtgc tatgttctct ttacccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcagccacc gttcatttat 1950
 tcattcatta aacctgagc actcactctg tgcgggtcc cggaagggt 2000
 gaggggggtca gacacaggcc ctgccctgc cctcagtgac tggccagtcc 2050
 agccaggcg gggagagatg tgtacatagg ttttaaagca gaccoagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tgcgtcgtgt cctccattac 2150
 ccactgctcc ccaaggctgg tgggacgggg tcccgggtgc aggggcaggt 2200
 atctccttcc cgttcctcat ccacctgcc agtgcctatc gttacagcaa 2250
 accccagggg gccttggcca ggtcaagggt tctgtgagga gaggacccag 2300
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 ggtgctaagg cccgggtggg cagctcctcg tctcagagcc ctctccggc 2650
 ctggtgctgc ctttacaac acctgcagga gaagggccac ggaagcccca 2700
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 caggccttcc gtttcttctt ccagggtggg gtggcctggt gttcccttag 2800
 ccttccaaac ccagggtgcc tgccctcttc ccagaggga ggcgcctcc 2850
 gccattggt gctcatgcag actctggggc tgagggtgcc cggggggtga 2900
 tctctggtgc tcacagcga gggagccgtg gctccatgac cagatgacgg 2950
 aaacagggtc tgaccaagtgc ccaggaagac ctgtgctata aaccacctg 3000
 cctgatcctg cccctgcctg acccgccac gccctgcctg ccagcatgat 3050

09690456 : 3103

400> 47	Met	Val	Thr	Ala	Ala	Leu	Gly	Pro	Val	Trp	Ala	Ala	Leu	Leu	Leu
1					5					10					15
Phe	Leu	Leu	Met	Cys	Glu	Ile	Arg	Met	Val	Glu	Leu	Thr	Phe	Asp	
				20					25					30	
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp	
				35					40					45	
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg	
				50					55					60	
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile	
				65					70					75	
Leu	Lys	Gly	Asp	Lys	Gly	Asp	Pro	Gly	Pro	Met	Gly	Leu	Pro	Gly	
				80					85					90	
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly	
				95					100					105	
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys	
				110					115					120	
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu	
				125					130					135	
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe	
				140					145					150	
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala	
				155					160					165	
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser	
				170					175					180	
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys	
				185					190					195	
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met	

	200		205		210
Gln Ser Gln Ser Val Met Leu Asp Leu Ala Tyr Gly Asp Arg Val					
	215		220		225
Trp Val Arg Leu Phe Lys Arg Gln Arg Glu Asn Ala Ile Tyr Ser					
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Ala Glu Asp Asp					

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<212> DNA
<213> Homo sapiens

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ccgctctccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150
tgctctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
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 <211> 673
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

95										100										105									
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Arg	Gly	Leu	Arg	Arg	Leu	Glu	Arg	Leu	125	Tyr	Leu	Gly	Lys	Asn	Arg	130	Leu	Gly	Lys	Asn	Arg	135							
Ile	Arg	His	Ile	Gln	Pro	Gly	Ala	Phe	140	Asp	Thr	Leu	Asp	Arg	Leu	145	Thr	Leu	Asp	Arg	Leu	150							
Leu	Glu	Leu	Lys	Leu	Gln	Asp	Asn	Glu	155	Leu	Arg	Ala	Leu	Pro	Pro	160	Leu	Arg	Ala	Leu	Pro	165							
Leu	Arg	Leu	Pro	Arg	Leu	Leu	Leu	Leu	170	Asp	Leu	Ser	His	Asn	Ser	175	Leu	Ser	His	Asn	Ser	180							
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Ala	Leu	Arg	Leu	Ala	Gly	Leu	Gly	Leu	200	Gln	Gln	Leu	Asp	Glu	Gly	205	Gln	Leu	Asp	Glu	Gly	210							
Leu	Phe	Ser	Arg	Leu	Arg	Asn	Leu	His	215	Asp	Leu	Asp	Val	Ser	Asp	220	Leu	Asp	Val	Ser	Asp	225							
Asn	Gln	Leu	Glu	Arg	Val	Pro	Pro	Val	230	Ile	Arg	Gly	Leu	Arg	Gly	235	Arg	Gly	Leu	Arg	Gly	240							
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Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	335	Leu	Glu	Leu	Asp	Tyr	Ala	340	Leu	Glu	Leu	Asp	Tyr	345							
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	350	Thr	Ala	Thr	Val	Pro	Thr	355	Ala	Thr	Val	Pro	Thr	360							
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	365	Ala	Leu	Ser	Ser	Ser	Leu	370	Leu	Ser	Ser	Ser	Leu	375							
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425	430	435
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln Met	Gly Gln Gly Thr Arg
440	445	450
Pro Ser Pro Thr	Pro Val Thr Pro Arg	Pro Pro Arg Ser Leu Thr
455	460	465
Leu Gly Ile Glu	Pro Val Ser Pro Thr	Ser Leu Arg Val Gly Leu
470	475	480
Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg
485	490	495
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr
500	505	510
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu
515	520	525
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly Pro
530	535	540
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His Thr
545	550	555
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala Arg
560	565	570
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val
575	580	585
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg
590	595	600
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val
605	610	615
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val Pro
620	625	630
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu
635	640	645
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<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 56
 <211> 3462
 <212> DNA
 <213> Homo sapiens

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<211> 811
<212> PRT
<213> Homo sapiens

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35 40 45
Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
50 55 60
Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
65 70 75
Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
80 85 90

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Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	110	120
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	125	135
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	140	150
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	155	165
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	170	180
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	185	195
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	200	210
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Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	245	255
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	260	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	275	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	290	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	305	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	320	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	335	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	350	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	365	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	380	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	395	405

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
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Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
425	430	435	
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
440	445	450	
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
455	460	465	
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
470	475	480	
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
485	490	495	
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
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Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
515	520	525	
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
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Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
545	550	555	
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
560	565	570	
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
575	580	585	
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
590	595	600	
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
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Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
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Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
635	640	645	
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
650	655	660	
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
665	670	675	
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser	Tyr
680	685	690	
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu	Trp
695	700	705	
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His	Glu
710	715	720	

Asn Ser Asp His Ile Ile Leu Ile Leu Leu Glu Pro Ile Pro Phe
 725 730 735
 Tyr Cys Ile Pro Thr Arg Tyr His Lys Leu Lys Ala Leu Leu Glu
 740 745 750
 Lys Lys Ala Tyr Leu Glu Trp Pro Lys Asp Arg Arg Lys Cys Gly
 755 760 765
 Leu Phe Trp Ala Asn Leu Arg Ala Ala Ile Asn Val Asn Val Leu
 770 775 780
 Ala Thr Arg Glu Met Tyr Glu Leu Gln Thr Phe Thr Glu Leu Asn
 785 790 795
 Glu Glu Ser Arg Gly Ser Thr Ile Ser Leu Met Arg Thr Asp Cys
 800 805 810

Leu

<210> 58
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
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<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

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<220>
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 aaaaagcata cttggaatgg cccaaggata ggtgtaaatg 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

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 cctcgaggagg gtcgccggga aaggaggga agaaggaagg gcggggcccg 100

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 agccagagccc agccccgcgg gccggtcaca cgcgcagcca gccggcgccc 200
 tcccgcgccc aagcgcgcgc ctctgctgtg ccctgcgccc ttgccccgcg 250
 ccagcttctg cgcocgcagc ccgcccgcg ccccggtga cgtgacct 300
 gccctggcg cgggcgag caggcatgtc ccgccgggg accgtaccc 350
 cagcgtgagc cctggtgctc ctggcagtga ccctggcgg ggtcgagacc 400
 caggcgagc ccctcagga ccctgattat tacgggcagg agatctggag 450
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<210> 62
 <211> 756
 <212> PRT
 <213> Homo sapiens

<400> 62
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 Glu Asp Pro Asp Tyr Tyr Gly Gln Glu Ile Trp Ser Arg Glu Pro
 35 40 45
 Tyr Tyr Ala Arg Pro Glu Pro Glu Leu Glu Thr Phe Ser Pro Pro
 50 55 60
 Leu Pro Ala Gly Pro Gly Glu Glu Trp Glu Arg Arg Pro Gln Glu
 65 70 75
 Pro Arg Pro Pro Lys Arg Ala Thr Lys Pro Lys Lys Ala Pro Lys
 80 85 90
 Arg Glu Lys Ser Ala Pro Glu Pro Pro Pro Gly Lys His Ser
 95 100 105
 Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala Ala Asn
 110 115 120
 Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu Ser
 125 130 135
 Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 140 145 150
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg
 155 160 165
 Gly Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr
 170 175 180
 Asp Gly Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile

	185		190		195
Glu Val Asp Ala	Arg 200	Arg Leu Thr Arg	Phe 205	Thr Gly Val Ile	Thr 210
Gln Gly Arg Asn Ser	215	Leu Trp Leu Ser	Asp 220	Trp Val Thr Ser	Tyr 225
Lys Val Met Val	Ser 230	Asn Asp Ser His	Thr 235	Trp Val Thr Val	Lys 240
Asn Gly Ser Gly	Asp 245	Met Ile Phe Glu	Gly 250	Asn Ser Glu Lys	Glu 255
Ile Pro Val Leu	Asn 260	Glu Leu Pro Val	Pro 265	Met Val Ala Arg	Tyr 270
Ile Arg Ile Asn	Pro 275	Gln Ser Trp Phe	Asp 280	Asn Gly Ser Ile	Cys 285
Met Arg Met Glu	Ile 290	Leu Gly Cys Pro	Leu 295	Pro Asp Pro Asn	Asn 300
Tyr Tyr His Arg	Arg 305	Asn Glu Met Thr	Thr 310	Thr Asp Asp Leu	Asp 315
Phe Lys His His	Asn 320	Tyr Lys Glu Met	Arg 325	Gln Leu Met Lys	Val 330
Val Asn Glu Met	Cys 335	Pro Asn Ile Thr	Arg 340	Ile Tyr Asn Ile	Gly 345
Lys Ser His Gln	Gly 350	Leu Lys Leu Tyr	Ala 355	Val Glu Ile Ser	Asp 360
His Pro Gly Glu	His 365	Glu Val Gly Glu	Pro 370	Glu Phe His Tyr	Ile 375
Ala Gly Ala His	Gly 380	Asn Glu Val Leu	Gly 385	Arg Glu Leu Leu	Leu 390
Leu Leu Val Gln	Phe 395	Val Cys Gln Glu	Tyr 400	Leu Ala Arg Asn	Ala 405
Arg Ile Val His	Leu 410	Val Glu Glu Thr	Arg 415	Ile His Val Leu	Pro 420
Ser Leu Asn Pro	Asp 425	Gly Tyr Glu Lys	Ala 430	Tyr Glu Gly Gly	Ser 435
Glu Leu Gly Gly	Trp 440	Ser Leu Gly Arg	Trp 445	Thr His Asp Gly	Ile 450
Asp Ile Asn Asn	Asn 455	Phe Pro Asp Leu	Asn 460	Thr Leu Leu Trp	Glu 465
Ala Glu Asp Arg	Gln 470	Asn Val Pro Arg	Lys 475	Val Pro Asn His	Tyr 480
Ile Ala Ile Pro	Glu 485	Trp Phe Leu Ser	Glu 490	Asn Ala Thr Val	Ala 495
Ala Glu Thr Arg	Ala	Val Ile Ala Trp	Met	Glu Lys Ile Pro	Phe

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<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
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tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
cccagcccgc gcttcagctc ttccccaggt gttgactcca gctccagctt 150
cagctccagc tccaggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtc tgtttccctg ccagacacca ctttcccg 300
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
ttgaaaaga actttctaaa gtgaggggaat atgtccaatt aattagtgtg 400
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacctg aactggactt cgagctgac aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttgggtga 550
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tggatcatgt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
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cccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcatgt 2550
aattttttgcc tttgtttaag cctggaactt gtaagaaaat gaaaatttaa 2600
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aaaaataatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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20 25 30
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

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Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	
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Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	
				245					250					255	
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	
				260					265					270	
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	
				275					280					285	
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	
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Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	
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Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	
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Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	
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Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	
				350					355					360	
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	
				365					370					375	
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	
				380					385					390	
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	
				395					400					405	
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	
				410					415					420	
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	
				425					430					435	
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	
				440					445					450	
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	
				455					460					465	
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	
				470					475					480	
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	
				485					490					495	
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln	
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<210> 68
 <211> 410
 <212> DNA

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<213> Homo sapiens

<220>
<221> unsure
<222> 206, 217, 387
<223> unknown base

<400> 68
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ggtgaacatc agcaaaccgt ctgtgggtca gctcaactgg agagggtttt 150
cttatctata tgggtcctgg ggtagggatt actctcccca gcatacaaac 200
aaaggnatgt attgggnggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga ttgtctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
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taacctgacc 410

<210> 69
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 69
agctgtggtc atggtggtgt ggtg 24

<210> 70
<211> 24
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 70
ctaccttggc cataggtgat ccgc 24

<210> 71
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 71
catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72
<211> 3127
<212> DNA
<213> Homo sapiens

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<400> 72
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 ccgtgtttgc tatgccgatg ctgtcctagt ggaacaact ccaactgtaac 200
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 tgtgagaatg agaaagggtg tgtccctgt aacattttg tggcgtataa 350
 agctgtatat cgtttgtgct ttggtttggc tatgttctat ctctctctct 400
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aaatgtatgg	ctgccttttg	aaatatttga	tgtgttgccct	ggcagggatac	1850
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caggtaggga	gtgtttagtg	gacaatagtg	taggttatgg	atggagggtgt	2000
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ggttcagtg	aaatgttttg	aactctgaag	gatttagaca	aggttttgaa	2150
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tagtccagtt	ctctcattta	aaaaaatgaa	gacactgaaa	tacagactta	2600
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cctgcttata	gtatactaca	cagttcaaaa	gatgttttaa	atgcttttgt	2850
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe	35	40	45	
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly	50	55	60	
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu	65	70	75	
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val	80	85	90	
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser	95	100	105	
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala	110	115	120	
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala	125	130	135	
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr	140	145	150	
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu	155	160	165	
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu	170	175	180	
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr	185	190	195	
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu	200	205	210	
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser	215	220	225	
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys	230	235	240	
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser	245	250	255	
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr	260	265	270	
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr	275	280	285	

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 Gln Gly Ile Ile Gly Leu Ile Leu Phe Leu Leu Cys Val Phe Tyr
 320 325 330
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 335 340 345
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 350 355 360
 Ser Asp Gly Ser Leu Glu Asp Gly Asp Asp Val His Arg Ala Val
 365 370 375
 Asp Asn Glu Arg Asp Gly Val Thr Tyr Ser Tyr Ser Phe Phe His
 380 385 390
 Phe Met Leu Phe Leu Ala Ser Leu Tyr Ile Met Met Thr Leu Thr
 395 400 405
 Asn Trp Ser Arg Tyr Glu Pro Ser Arg Glu Met Lys Ser Gln Trp
 410 415 420
 Thr Ala Val Trp Val Lys Ile Ser Ser Ser Trp Ile Gly Ile Val
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 Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

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 <222> 48, 163
 <223> unknown base

<400> 74
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 ttgttgagtg atgtgtagct tgtgtaatgt tgataaccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaaag gtgttgtccc 300
 ttgtaacatt ttgggtggct ataaagctgt atatcgtttg tgctttgggtt 350
 tggctatggt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

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<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
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cgagctggat accangtttg tgtggaagtg ccccggtttt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tnatgcact 150
ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgtcctt gtaacatttt gggtggctat aaagctgtat atngttgtg 300
ctttggtttg gctangttct atntttctct ctctttacta atgatcaag 350
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tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
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gtttgtgtgg aagtgcoccc tgtttgctat gccgatgctg tccatgtgga 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcttgttgg 200
agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250
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attttggttg gctataaagc tgtatatcgt ttgtgcttgg gtttggctat 350
gttcctatctt ctctctctt tactaatgat caaagtgaag agtagcagtg 400
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gcaattgcaa ttattattgg ggc 473

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<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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gaaagggtgtt gtcccttctg aacatttttg gttggctata aagctgtata 200
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cttcattcca gaaggaactt ttacaactgt gtgggtttat gtaggcattg 400
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gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaaatc 500
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tggtgcttct gtaatg 666

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<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
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<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
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<210> 80
<211> 26

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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
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<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
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<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

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<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
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 Leu Lys Gly Arg Phe 35 Gln Arg Asp Arg 40 Arg Asn Ile Arg Pro Asn 45
 Ile Ile Leu Val Leu 50 Thr Asp Asp Gln Asp 55 Val Glu Leu Gly Ser 60
 Met Gln Val Met Asn 65 Lys Thr Arg Arg Ile 70 Met Glu Gln Gly Gly 75
 Ala His Phe Ile Asn 80 Ala Phe Val Thr Thr 85 Pro Met Cys Cys Pro 90
 Ser Arg Ser Ser Ile 95 Leu Thr Gly Lys Tyr 100 Val His Asn His Asn 105
 Thr Tyr Thr Asn 110 Asn Glu Asn Cys Ser Ser 115 Pro Ser Trp Gln Ala 120
 Gln His Glu Ser Arg 125 Thr Phe Ala Val Tyr 130 Leu Asn Ser Thr Gly 135
 Tyr Arg Thr Ala Phe 140 Phe Gly Lys Tyr Leu 145 Asn Glu Tyr Asn Gly 150
 Ser Tyr Val Pro 155 Gly Trp Lys Glu Trp 160 Val Gly Leu Leu Lys 165
 Asn Ser Arg Phe Tyr 170 Asn Tyr Thr Leu Cys 175 Arg Asn Gly Val Lys 180
 Glu Lys His Gly Ser 185 Asp Tyr Ser Lys Asp 190 Tyr Leu Thr Asp Leu 195
 Ile Thr Asn Asp Ser 200 Val Ser Phe Phe Arg 205 Thr Ser Lys Lys Met 210
 Tyr Pro His Arg Pro 215 Val Leu Met Val Ile 220 Ser His Ala Ala Pro 225
 His Gly Pro Glu Asp 230 Ser Ala Pro Gln Tyr 235 Ser Arg Leu Phe Pro 240
 Asn Ala Ser Gln His 245 Ile Thr Pro Ser Tyr 250 Asn Tyr Ala Pro Asn 255

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Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln
				275					280					285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met
				290					295					300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr
				305					310					315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly
				320					325					330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val
				335					340					345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val
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Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu
				365					370					375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu
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Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met
				395					400					405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu
				410					415					420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe
				425					430					435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu
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Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val
				455					460					465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro
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Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys
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Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp
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Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys
				515					520					525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val
				530					535					540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp
				545					550					555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala
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Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	
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Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	
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His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	
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Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	
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Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	
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Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	
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Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	
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Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	
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Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	
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Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	
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Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	
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Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	
				740					745					750	
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	
				755					760					765	
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	
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Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	
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Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	
				800					805					810	
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	
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Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	
				830					835					840	
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	
				845					850					855	
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				
				860					865						

<210> 85
 <211> 19
 <212> DNA

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<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 85
gaagccggct gtctgaatc 19

<210> 86
<211> 18
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<220>
<223> Synthetic oligonucleotide probe

<400> 86
ggccagctat ctccgag 18

<210> 87
<211> 18
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 87
aagggcctgc aagagaag 18

<210> 88
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 88
cactgggaca actgtggg 18

<210> 89
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 89
cagaggcaac gtggagag 18

<210> 90
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 90
aagtattgtc atacagtgtt c 21

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<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgaggtt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
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<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
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gtggcggttc tgctgctgct gctgctgctg gccacctgcc tttccacgg 200
acggcaggac tgtgacgtgg agaggaaacc tacagctgca gggggaaacc 250
gagtcgcgcg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300
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gggcctccac caccaccacc acccccgcga ccccctcac cacctccacc 400
accaccacca ccccaccgc caccatcccc gccacgtcgt ctgagggtgc 450
tgtgcgggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctgggg 550
gaacgagggg aacaatagac tggggcttgc tccagctgca ttgcatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgtgtaagg gtttggggag tggagagcaa ggtgtctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc ccgtcttgac 800
 ctccatcatca ggctgtgca ggctcttggc gggcagggca ctgggagagg 850
 cctgagaat gtccttttgg ttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
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 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
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 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgagtgc tgggtcacc cccatccgca acgtcactgt ggctacaag 200
 ttccacatg ggctctatg tgagactggg cggtcttttc ctgagagctg 250
 cagcatctct cccaagctcc gctccatcgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatgcacctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgttctcct tcccggcacc cagccatgtg gtgacagcca 450
 ccttccctca caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catcctgcct tggacaccta catcaaggag cgaagactgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttcagt tgcctactgg 600
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 tgacacaagt agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccgggagac ttcagctgcc aactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850
 cagcggctcc tcttttgagg agctggactt ggaggcgagc gggcccttag 900
 gggagtacag gctggaccct gggactgagc ccctggggac taccaagtgg 950
 ctctgggagc ccaactgccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctcctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
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 cccagggctg ccgccctgt tgtgtctttt ttccagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
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 ccccggtcc ctgccccgcg ccagtcctg accctgccc cctcaactcct 100
 cccgctccat ctgctgtgtgc tgcgtgtgct cagtgcggcg gtgtgccggg 150
 ctgaggctgg gctcgaaacc gaaagtccc tccggaccct caagtggag 200
 accctgggtg agccccaga accatgtgcc gagccccgtg cttttggaga 250

cacgcttcac atacactaca cggaagcctt ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctggtta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaaggcaa atcattcctt ctcaacttggc ctatggaaaa cggggatttc 450
 caccatctgt cccagcggat gcagtgtgtc agtatgacgt ggagctgatt 500
 gcaataatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agaccctaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataataa taaattttaa 700
 aaacttaaa aaaaaaaaaa aaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
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 Leu Leu Leu Ser Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

<400> 100

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cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaccgca aagtcccgct cggaccctcc aagtggagac 200
cctggtggag cccccagAAC catgtgccga gcccgctgct ttggagaca 250
cgcttcacat acactacacg ggaagcttg tagatggagc tattattgac 300
acctccctga ccagagagccc tctggttata gaacttgccc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggaat cattccttct cacttgacct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500
actaatccga gccaaactact ggctaaagct ggtgaaggcg attttgcctc 550
tggtagggat ggccatggtg ccaccctcct gggcctcatt gggtatcacc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

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gaaccatgtg ccgagccgcg tgcttttga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccacctatc gtcccagcgg 300
atgcagtggt gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctgggtgaa gggcattttg cctctggttag ggatggccat 400

ggtgccagcc ctctctgggc tcattgggta tcacctatac agaaagcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaacaacg 500
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 102
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 aaatcggggg agtgaggcgg gccggcgagg cgcgacacgg ggctccggaa 100
 ccactgcacg acggggctgg actgacctga aaaaaatgct tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgcaatac 200
 tattgtcttc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatcccacca tgaagattt caaccactca 300
 taccatgcct gtgggtgttat agcaaccata gccttcctaa tgattaatgc 350
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 gtcaaacagg tgctcgcat tggcttttcg ttgggttcat gttggccttt 450
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 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaaac 750
 acgagaacac ctacaacaac accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtcaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgtcata tctgaggctc aaaaccacaa 950
 tgaaagtgtc ctgaagattt aatgtgttta ttcaaatgtg gtctcttctg 1000
 tgtcaaatgt taaatgaaat ataaacattt tttagttttt aaaatatctc 1050
 gtggtcaaaa ttcttctcct ctataatttg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaatgtaa ctggcttttg aggggtctcc aaggggtgag 1150
 tggacgtggt ggaagagaga agcaccatgg tccagccacc aggtccctcg 1200
 tgtcccttcc atgggaaggt cttccgctgt gcctctcatt ccaagggcag 1250
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tccacatcca ccactg 1316

<210> 103
<211> 157
<212> PRT
<213> Homo sapiens

<400> 103
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Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30
Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45
Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60
Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75
Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90
Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105
Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120
Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135
Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150
Arg Thr Glu Asp Leu Trp Gln
155

<210> 104
<211> 545
<212> DNA
<213> Homo sapiens

<400> 104
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ggctccggaa ccactgcacg acggggctgg actgacctga aaaaaatgtc 100
tggatttcta gagggcttga gatgctcaga atgcattgac tggggggaaa 150
agcgcaatac tattgcttcc attgctgctg gtgtactatt tttacaggc 200
tgggtgatta tcatagatgc agctgttatt tatccacca tgaagattt 250
caaccactca taccatgcct gtggtgttat agcaaccata gccttcttaa 300
tgattaatgc agtatcgaat ggacaagtc gaggtgatag ttacagttaa 350
ggtgtgtcgg gtcaaacagg tgctcgcat tggcttttcg ttggtttcat 400

gttggccttt ggaatctctga ttgcatctat gtggattctt tttggagggtt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatttttc 500
 cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
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 agaatgcacg actgggggaa aagcgcaaat actattgctt ccattgctgc 100
 tgggtgtaata ttttttacag gctgggtggat tatcatagat gcagntgtta 150
 tttatccac catgaaagat ttcaaccant cataccatgc ctgtgggtgtt 200
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagtg aaggttggtt gggcaaaaca ggtgctcgca 300
 tttggctttt cgttgggttc atgttggcct ttggatctct gattgcatct 350
 atgtggatto tttttggagg ttatgttgct aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
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 aatgtttgga ttttttagag gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttccattg ctgctgggtg actatttttt 150
 acagggtggt ggattatcat agatgcagct gttattttat ccaccatgaa 200
 agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
 tctaataatg taatgcagta tcgaatggac aagtcaggag tgatagttaa 300
 agtgaaggtt gtttgggtca aacagggtgnt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400

ggagggttatg ttgctaaaga aaaagacata gtataccctg gaatttctnt 450
atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150
tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
tgcagtatng aatggacaag tccgaggtga tagttacagt gaaggttggt 250
tgggtcaaac aggtgntngc atttggcttt tngttggttt catgttggcc 300
tttggatctn tgattgcatt tatgtggatt ntttttgag gttatgttgc 350
taaagnaaaa gacatagtat acctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggactgacct gaaaaaaaaatg tttggatttn tagagggcct gagatgctca 150
gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200
tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250
tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 300
atagcaacca tagccttctt aatgattaat gcagtatcga atgacaagt 350
ccgaggtgat agttacagtg aaggttgtct ggggtcaaaca ggtgctcgca 400
tttggctttt cgttggtttc atgttggtct ttggaatnct gattgcatct 450
atgtggattc tttttggagg ttatgttgc aaagaaaaag acatagtata 500
ccctgaatt gctgtatttt tccagaatgc cttcatnttt ttggaggggc 550

tg 552

<210> 109
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 109
gggtggatgg tactgctgca tcc 23

<210> 110
<211> 26
<212> DNA
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<220>
<223> Synthetic oligonucleotide probe

<400> 110
tggtgtgctg tgggaaatca gatgtg 26

<210> 111
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 111
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<210> 112
<211> 3004
<212> DNA
<213> Homo sapiens

<400> 112
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ccgaatcctt tctccgaaga tgtcaaacgg cccccagcgc ccttggtaac 150
tgacaaggag gccaggaaga aggtttctcaa acaagctttt tcagccaacc 200
aagtgccgga gaagctggat gtggtggtaa ttggcagctg ctttgggggc 250
ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctggtgct 300
ggaacaacat accaaggcag ggggctgctg tcataccttt ggaagaatg 350
gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400
agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450
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gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttcaca ggaggaagct atcattgaca agtatataaa 600
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 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
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 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys His Thr Phe	Gly 110	Lys Asn Gly Leu	Glu 115	Phe Asp Thr Gly	Ile 120
His Tyr Ile Gly	Arg 125	Met Glu Glu Gly	Ser 130	Ile Gly Arg Phe	Ile 135
Leu Asp Gln Ile	Thr 140	Glu Gly Gln Leu	Asp 145	Trp Ala Pro Leu	Ser 150
Ser Pro Phe Asp	Ile 155	Met Val Leu Glu	Gly 160	Pro Asn Gly Arg	Lys 165
Glu Tyr Pro Met	Tyr 170	Ser Gly Glu Lys	Ala 175	Tyr Ile Gln Gly	Leu 180
Lys Glu Lys Phe	Pro 185	Gln Glu Glu Ala	Ile 190	Ile Asp Lys Tyr	Ile 195
Lys Leu Val Lys	Val 200	Val Ser Ser Gly	Ala 205	Pro His Ala Ile	Leu 210
Leu Lys Phe Leu	Pro 215	Leu Pro Val Val	Gln 220	Leu Leu Asp Arg	Cys 225
Gly Leu Leu Thr	Arg 230	Phe Ser Pro Phe	Leu 235	Gln Ala Ser Thr	Gln 240
Ser Leu Ala Glu	Val 245	Leu Gln Gln Leu	Gly 250	Ala Ser Ser Glu	Leu 255
Gln Ala Val Leu	Ser 260	Tyr Ile Phe Pro	Thr 265	Tyr Gly Val Thr	Pro 270
Asn His Ser Ala	Phe 275	Ser Met His Ala	Leu 280	Leu Val Asn His	Tyr 285
Met Lys Gly Gly	Phe 290	Tyr Pro Arg Gly	Gly 295	Ser Ser Glu Ile	Ala 300
Phe His Thr Ile	Pro 305	Val Ile Gln Arg	Ala 310	Gly Gly Ala Val	Leu 315
Thr Lys Ala Thr	Val 320	Gln Ser Val Leu	Leu 325	Asp Ser Ala Gly	Lys 330
Ala Cys Gly Val	Ser 335	Val Lys Lys Gly	His 340	Glu Leu Val Asn	Ile 345
Tyr Cys Pro Ile	Val 350	Val Ser Asn Ala	Gly 355	Leu Phe Asn Thr	Tyr 360
Glu His Leu Leu	Pro 365	Gly Asn Ala Arg	Cys 370	Leu Pro Gly Val	Lys 375
Gln Gln Leu Gly	Thr 380	Val Arg Pro Gly	Leu 385	Gly Met Thr Ser	Val 390
Phe Ile Cys Leu	Arg 395	Gly Thr Lys Glu	Asp 400	Leu His Leu Pro	Ser 405
Thr Asn Tyr Tyr	Val 410	Tyr Tyr Asp Thr	Asp 415	Met Asp Gln Ala	Met 420

Glu	Arg	Tyr	Val	Ser	Met	Pro	Arg	Glu	Glu	Ala	Ala	Glu	His	Ile
				425					430					435
Pro	Leu	Leu	Phe	Phe	Ala	Phe	Pro	Ser	Ala	Lys	Asp	Pro	Thr	Trp
				440					445					450
Glu	Asp	Arg	Phe	Pro	Gly	Arg	Ser	Thr	Met	Ile	Met	Leu	Ile	Pro
				455					460					465
Thr	Ala	Tyr	Glu	Trp	Phe	Glu	Glu	Trp	Gln	Ala	Glu	Leu	Lys	Gly
				470					475					480
Lys	Arg	Gly	Ser	Asp	Tyr	Glu	Thr	Phe	Lys	Asn	Ser	Phe	Val	Glu
				485					490					495
Ala	Ser	Met	Ser	Val	Val	Leu	Lys	Leu	Phe	Pro	Gln	Leu	Glu	Gly
				500					505					510
Lys	Val	Glu	Ser	Val	Thr	Ala	Gly	Ser	Pro	Leu	Thr	Asn	Gln	Phe
				515					520					525
Tyr	Leu	Ala	Ala	Pro	Arg	Gly	Ala	Cys	Tyr	Gly	Ala	Asp	His	Asp
				530					535					540
Leu	Gly	Arg	Leu	His	Pro	Cys	Val	Met	Ala	Ser	Leu	Arg	Ala	Gln
				545					550					555
Ser	Pro	Ile	Pro	Asn	Leu	Tyr	Leu	Thr	Gly	Gln	Asp	Ile	Phe	Thr
				560					565					570
Cys	Gly	Leu	Val	Gly	Ala	Leu	Gln	Gly	Ala	Leu	Leu	Cys	Ser	Ser
				575					580					585
Ala	Ile	Leu	Lys	Arg	Asn	Leu	Tyr	Ser	Asp	Leu	Lys	Asn	Leu	Asp
				590					595					600
Ser	Arg	Ile	Arg	Ala	Gln	Lys	Lys	Lys	Asn					
				605					610					

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
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 gatagggtcg acgtgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaagagg ggaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc ttgaccgcc attgaaggca 450

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
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Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 116

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 acgctcagcc cccagcacgt caccatcagg gactacgggtg tgcctgtgta 250
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 aaggatgagg ccacaatgc ctgtgtcttc accattagtc ccgtgcagcc 400
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<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
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 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens

<400> 118

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gaaggaagac tgggttcag ggactgtgt ctctcctggg gcccgggacc 3250
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 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gctgaagccc cgtatatatta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
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 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Gly
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	245	250	255
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	260	265	270
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	275	280	285
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	290	295	300
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	305	310	315
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	320	325	330
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	335	340	345
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	350	355	360
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	365	370	375
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	380	385	390
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	395	400	405
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	410	415	420
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	425	430	435
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	440	445	450
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	455	460	465
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr	470	475	480
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys	485	490	495
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys							500		

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

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<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

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gcgaagaggg tcagcactgc atgggccagg actgtacagc ctgtgacctg 750

acctgccc aa tgggccaggt gaatgctgac tgtgatgcct gcattgtgcca 800

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 catggttttg ccacctctg caatagtgat aatctgatgc tgaagatcaa 4050

Gln Val Asn Ala Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	220	225
Leu His Gly Ala Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	235	240
Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	250	255
Thr Asp Ser Asp Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	265	270
Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	280	285
Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	295	300
Ala Glu Phe Val Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	310	315
Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	325	330
Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	340	345
Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	355	360
Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	370	375
Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	385	390
Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	400	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	415	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	430	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	445	450
Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	460	465
Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	475	480
Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	490	495
Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	505	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	520	525

Lys Phe Asn Pro Asn Ala Ile Gly Val Pro Gln Pro Tyr Leu Asn
 845 850
 Lys Leu Asn Tyr Arg Arg Thr Asp His Glu Asp Pro Arg Val Lys
 860 865 870
 Lys Thr Ala Phe Gln Ile Ser Met Ala Lys Pro Arg Pro Asn Ser
 875 880 885
 Ala Glu Glu Ser Asn Gly Pro Ile Tyr Ala Phe Glu Asn Leu Arg
 890 895 900
 Ala Cys Glu Glu Ala Pro Pro Ser Ala Ala His Phe Arg Phe Tyr
 905 910 915
 Gln Ile Glu Gly Asp Arg Tyr Asp Tyr Asn Thr Val Pro Phe Asn
 920 925 930
 Glu Asp Asp Pro Met Ser Trp Thr Glu Asp Tyr Leu Ala Trp Trp
 935 940 945
 Pro Lys Pro Met Glu Phe Arg Ala Cys Tyr Ile Lys Val Lys Ile
 950 955 960
 Val Gly Pro Leu Glu Val Asn Val Arg Ser Arg Asn Met Gly Gly
 965 970 975
 Thr His Arg Arg Thr Val Gly Lys Leu Tyr Gly Ile Arg Asp Val
 980 985 990
 Arg Ser Thr Arg Asp Arg Asp Gln Pro Asn Val Ser Ala Ala Cys
 995 1000 1005
 Leu Glu Phe Lys Cys Ser Gly Met Leu Tyr Asp Gln Asp Arg Val
 1010 1015 1020
 Asp Arg Thr Leu Val Lys Val Ile Pro Gln Gly Ser Cys Arg Arg
 1025 1030 1035
 Ala Ser Val Asn Pro Met Leu His Glu Tyr Leu Val Asn His Leu
 1040 1045 1050
 Pro Leu Ala Val Asn Asn Asp Thr Ser Glu Tyr Thr Met Leu Ala
 1055 1060 1065
 Pro Leu Asp Pro Leu Gly His Asn Tyr Gly Ile Tyr Thr Val Thr
 1070 1075 1080
 Asp Gln Asp Pro Arg Thr Ala Lys Glu Ile Ala Leu Gly Arg Cys
 1085 1090 1095
 Phe Asp Gly Thr Ser Asp Gly Ser Ser Arg Ile Met Lys Ser Asn
 1100 1105 1110
 Val Gly Val Ala Leu Thr Phe Asn Cys Val Glu Arg Gln Val Gly
 1115 1120 1125
 Arg Gln Ser Ala Phe Gln Tyr Leu Gln Ser Thr Pro Ala Gln Ser
 1130 1135 1140
 Pro Ala Ala Gly Thr Val Gln Gly Arg Val Pro Ser Arg Arg Gln
 1145 1150 1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

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 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 125
 ctggtgcctc aacagggagc ag 22

<210> 126
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 126
 ccattgtgca ggtcaggta cag 23

<210> 127
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 127
 ctggagcaag tgctcagctg cctgtggta cactgggggc 40

<210> 128
 <211> 2819
 <212> DNA
 <213> Homo sapiens

<400> 128
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 ttgggatctg ctttgaggtc ccactctcat ttaaaaaaaaa atacagagac 150
 ctacctaccg gtacgcatac atacatatgt gtatatatat gtaaaactaga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
 acaaagaatt tagagatgta ttigtcaaga tccctgtcga ttcatgccct 300
 ttgggttacg gtgtcctcag tgaatgcagcc ctaccctttg gtttggggac 350
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 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaactc gatcctccg atattacctg tggagaccct cctgagacgt 500
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 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctgattatg gacgaacatg gcagccctat cagtattatg 800
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 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129
 <211> 438
 <212> PRT
 <213> Homo sapiens

<400> 129
 Met Tyr Leu Ser Arg Ser Leu Ser Ile His Ala Leu Trp Val Thr
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 20 25 30
 Asp Leu Cys Lys Thr Gln Ile Tyr Thr Glu Gly Lys Val Trp
 35 40 45
 Asp Tyr Met Ala Cys Gln Pro Glu Ser Thr Asp Met Thr Lys Tyr
 50 55 60
 Leu Lys Val Lys Leu Asp Pro Pro Asp Ile Thr Cys Gly Asp Pro
 65 70 75
 Pro Glu Thr Phe Cys Ala Met Gly Asn Pro Tyr Met Cys Asn Asn
 80 85 90
 Glu Cys Asp Ala Ser Thr Pro Glu Leu Ala His Pro Pro Glu Leu
 95 100 105
 Met Phe Asp Phe Glu Gly Arg His Pro Ser Thr Phe Trp Gln Ser
 110 115 120
 Ala Thr Trp Lys Glu Tyr Pro Lys Pro Leu Gln Val Asn Ile Thr

	125		130		135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140		145		150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155		160		165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170		175		180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185		190		195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200		205		210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215		220		225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230		235		240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245		250		255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260		265		270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275		280		285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290		295		300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305		310		315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320		325		330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335		340		345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350		355		360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365		370		375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380		385		390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395		400		405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
	410		415		420
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
	425		430		435
Leu Val Phe					

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<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
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<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
aggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctggctacg gaattggctt cctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
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ctgaggaggc ggcgggttagc tggcaggcgc cgacttcga aggccgcggt 100
ccgggcgagg tgtcctcatg acttctcttg tggacctgt cegtgatctt 150
ttttgcctgc gtggtacggg taagggatgg actgccctc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acggctcaag 250
agtttagcct tgcgactggc ccagtatcca ggtcgaggtt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gctgcacgtg 350
 ctatctgctc ctgccagtg ccagcagcca tggccttctg ctctctggag 400
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 gcataaaata ctgaggctga tttagtcagg gcaaaaccat ttactttaca 1250
 tattogtttt caataactgc tggtcatgtt acacaagctt cttacggttt 1300
 tcttgtaaca ataaatattt tgagtaaaata atgggtacat tttacaaaac 1350
 tcagtagtac aacctaaact tgtataaaa tggtgtaaaa tgtatagcca 1400
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 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135
 <211> 228
 <212> PRT
 <213> Homo sapiens

<400> 135
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 Leu Pro Leu Ser Ala Ser Thr Asp Phe Tyr His Thr Gln Asp Phe
 20 25 30
 Leu Glu Trp Arg Arg Arg Leu Lys Ser Leu Ala Leu Arg Leu Ala
 35 40 45

Gln Tyr Pro Gly Arg Gly Ser Ala Glu Gly Cys Asp Phe Ser Ile
 50 55 60
 His Phe Ser Ser Phe Gly Asp Val Ala Cys Met Ala Ile Cys Ser
 65 70 75
 Cys Gln Cys Pro Ala Ala Met Ala Phe Cys Phe Leu Glu Thr Leu
 80 85 90
 Trp Trp Glu Phe Thr Ala Ser Tyr Asp Thr Thr Cys Ile Gly Leu
 95 100 105
 Ala Ser Arg Pro Tyr Ala Phe Leu Glu Phe Asp Ser Ile Ile Gln
 110 115 120
 Lys Val Lys Trp His Phe Asn Tyr Val Ser Ser Ser Gln Met Glu
 125 130 135
 Cys Ser Leu Glu Lys Ile Gln Glu Glu Leu Lys Leu Gln Pro Pro
 140 145 150
 Ala Val Leu Thr Leu Glu Asp Thr Asp Val Ala Asn Gly Val Met
 155 160 165
 Asn Gly His Thr Pro Met His Leu Glu Pro Ala Pro Asn Phe Arg
 170 175 180
 Met Glu Pro Val Thr Ala Leu Gly Ile Leu Ser Leu Ile Leu Asn
 185 190 195
 Ile Met Cys Ala Ala Leu Asn Leu Ile Arg Gly Val His Leu Ala
 200 205 210
 Glu His Ser Leu Gln Asp Pro Arg Ser Trp Phe Cys Trp Leu Asp
 215 220 225
 Gln Thr Ser

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttctgtg agacctgtg gtgggaattc acagcttctnt atgacactac 50
 ctgcattggc ntacctcca ggccatacgc ttttcttgag tttagacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc cntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgaacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cgggcgctcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctagcct gggctctgggt gcttggcggc ggcggttcc 250
tcccgcctcg tctctcccg gcccagaggc acctcggtt cagtcatgct 300
gagcagagta tggaaagacc tgactacgaa gtgctatccg tgcgagaaca 350
gttatccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta cactctctgc cacatcttcc tgaccgcgtt caaagaagct 450
gctgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gtcgagctg tgcaccttta ccctggcaat tgccctgggt gctgtcctcg 550
tctgcacctt ctccatcacc agcaatgagg tgctgtcttc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcacctatg gcctctggaa 650
ccttggtttt ctcttcccca acctgtccct catcttctc atgcccttg 700
catatttctt cactgagtct gagggtcttg ctggctccag aaagggtgct 750
ctgggcccgg tctatgagac agtggtgatg ttgatgtccc taactctgt 800
ggtgtctagg atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tgggttctg ctgctcctgg tgtgtaetcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgtcc agcctttgag 1050
gaggcagccc tgaccocgag gatctgtaat cctacttctt gctggctgcc 1100
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gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250
gctcattgtg gccatccaca tctggagct gctcatogag gaggtgcc 1300
tgcccagagg catgcagggt acctccttag gccaggtctc cttctccaag 1350
ctgggtcctt ttggtgccgt cattcaggtt gtactcatct tttaacctaat 1400
ggtgtctcca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tctaagctc agcacttcct gtcttctctc gaaccttggg 1550
 gctcactgcg ttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
 gcaattttcta cattgtgttc ctctacaacg cagccttttg aggccctacc 1650
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 aggcattctag gaagaccag caccagtgc ctccagctgg gggtgggaag 1800
 gaaaaaactg gacactgcca tctgctgcct aggcctggag ggaagcccaa 1850
 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900
 gagcagagcc atctgcacta ttgcataatc tgagccagag tttgggacca 1950
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 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcagcg 2150
 togggagata gattgtctcc cttgcctctg gccagcaga gcctaagcac 2200
 tgtgtatcc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu	1	5	10	15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe	20	25	30	35
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys	35	40	45	50
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val	50	55	60	65
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala	65	70	75	80
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu	80	85	90	95
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn	95	100	105	110
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro	110	115	120	125
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr	125	130	135	140

	125		130		135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg			
	140	145			150
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu Val			
	155	160			165
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys			
	170	175			180
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro			
	185	190			195
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu Leu			
	200	205			210
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly			
	215	220			225
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln			
	230	235			240
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile			
	245	250			255
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu			
	260	265			270
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu			
	275	280			285
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro			
	290	295			300
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu			
	305	310			315
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala			
	320	325			330
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe			
	335	340			345
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile			
	350	355			360
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro			
	365	370			375
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr			
	380	385			390
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala			
	395	400			405
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu			
	410	415			420
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile			
	425	430			435
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys			

tttacccctgg caattgccct ggggtgctgc ctgctcctgc ccttctccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 141
 gactgtatct gagcccccaga ctgc 24

<210> 142
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 142
 tcagcaatga ggtgctgctc 20

<210> 143
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 143
 tgaggaagat gagggacagg ttgg 24

<210> 144
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 144
 tatggaagca cctgactacg aagtgcctatc cgtgcgagaa cagctattcc 50

<210> 145
 <211> 685
 <212> DNA
 <213> Homo sapiens

<400> 145
 gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150

gtcagtggaac agtttgcag gacacccagg ccattattt toctccagcc 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttgcgtt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaagaaa tactaagaga aacccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc agggccaggg ctcccctctc agtagccctg 400
 tgcaacttga tttttcttca gagatgggat ttccctcatgc tgcccaggct 450
 aatgttgaac tcotgggctc aagtgatctg ctcacctagg cctctcaaa 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtgttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta ttacaagaa tgataatgct ctggcattcc ttaataaaa 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
 Met Leu Leu Trp Val Ile Leu Leu Val Leu Ala Pro Val Ser Gly
 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
 cagaagagg ggctagctag ctgtctctgc ggaccaggga gaccccgcg 50
 ccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcgccggcg gagggaggctg tgaggagtgt gtggaacagg accccggaca 150

gaggaacat ggctccgag aacctgagca ccttttgct gttgctgcta 200
 tacctcatcg gggcggatg tgccggacga gatttctata agatcttggg 250
 ggtgcctcga agtgccctota taaaggata taaaaggcc tataggaac 300
 tagccctgca gtttcatccc gaccggaacc ctgatgatcc acaagcccg 350
 gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagta 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccatggagac attttttcac acttcttttg ggattttggt 500
 ttcattgttg gaggaacccc tcgtcagcaa gacagaaata ttccaaggag 550
 aagtgatatt attgtagatc tagaagtcac ttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaacaacac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg tcggcaagag atgcggacca ccagctggg 700
 ccctgggctc ttccaaatga ccaggagggt ggtctgagac gaatgcccta 750
 atgtcaaac agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccctttt attggagaag gtgagcctca 850
 cgtggatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaagg 900
 acccaatatt tgaagagaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggctttgag atggatatta ctcaacttga 1000
 tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggctctt tgataatcac ttttgatgtg gattttccaa aagaacagt 1150
 aacagaggaa gcgagagaag gtatcaaaac gctactgaaa caagggtcag 1200
 tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcagggttt 1300
 ttttgtgtgt gttttgtttt ttattttcaa tatgcaagtt aggcctaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggctt aagaatttgt 1400
 ccatttgcac tcggaaaaga atgaccagca aaaggtttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgctgc gctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550
 gttgttagca atttcattca aaatccaac tggagaagtc tgtttttaaa 1600
 tacattttgt tgttttttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
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Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
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 gacccggaca gaggaacctt ggttccgcag aacntgagca cnttttgcct 150
 gttgntgnta tacttcatcg gggcggtgat tgcgggacga gatttntata 200
 agattttggg gtgcctngaa gtgccttnta taaaggatat taaaaaggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttnttttg 450
 ggattttggt ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
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 aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatt 100
 ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150
 gaccgggact gagtcaggag ccctctgga gcatggagac tgttgtgatt 200
 gttgccatag gtgtgtcggc caccatcttt ctggtcttct ttgcagcctt 250
 ggtgtgtggt tgcaggcagc gctactgccg gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagacccc 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
 cattgaggcc attctggaga atgaagactg gatcgaagat gcctcgggtg 450
 tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
 aagcttgttg ccatgacaat gggctctggg gccaaagatga agacttcagc 550
 cagtgtcagc gacatcattg tgggtgccc aa gcgatcagc cccagggttg 600
 atgatgtgtg gaagtogatg taccctccgt tggaccccaa actcctggac 650
 gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgtggtgac 700
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
 tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gttctgaatt tagtgccctac aggcacagc ctagccatga aggccctgc 900
 cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
 agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
 gagatcccg tcagtttatg cctcttttgc agttgcaaac tgtggtggt 1050
 gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100
 agaggagtat tgaaaactgg tggactgtca gctttattta gtcacctag 1150
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
 taaaattaga atttctggcc tctctogac ggtcagaatg tgtggcaatt 1250
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
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 aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
 tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaat 1500
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile
1				5					10					15

Phe	Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg
				20					25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu			
	65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu			
	80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr			
	95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys			
	110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile			
	125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu			
	140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser			
	155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr			
	170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu			
	185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp			
	200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala			
	215	220	225
Ile			

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
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 tcgcgcgtgt cccacacct gcagccatga tctcottaac ggacacgcag 100
 aaaaattggaa tgggattaac aggatttgga gtgtttttcc tgttcttttg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggctttt gtaattggtt tagaaagaac attcagatto 250
 ttcttccaaa aacataaaat gaaagctaca ggtttttttc tgggtggtgt 300

atttgtatgc cttattggtt ggcctttgat aggcgatgac ttcgaaattt 350
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 agcatccata ggcatttgc ttttagaagt gtccactgca atggcaaaaa 900
 tttttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
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 ggattacttt ttttngncn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.
 <220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
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 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 70
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135
Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
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<211> 1781
<212> DNA
<213> Homo sapiens

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aagagcgtcc acgcatcatg gacctgcgg gactgctgaa gtctcagttc 200
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 gtgatgctgc tggagtgggtg gtcgggacg gaatgcacca tcttcacgga 400
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 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
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 taaagtgtt tctgtgttca aaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

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				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
				80					85					90
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
				95					100					105
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
				110					115					120
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
				125					130					135
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln
				140					145					150
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr
				155					160					165
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe
				170					175					180
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys
				185					190					195
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly
				200					205					210
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val
				215					220					225
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu
				230					235					240
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val
				245					250					255
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys
				260					265					270
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln
				275					280					285
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val

	290		295		300									
Pro	Pro	Arg	Arg	Pro	Trp	Thr	Leu	Val	Asn	Trp	Leu	Phe	Trp	Ala
				305					310					315
Ser	Leu	Val	Leu	Tyr	Pro	Phe	Phe	Gln	Phe	Leu	Val	Ser	Met	Ile
				320					325					330
Arg	Ser	Gly	Ser	Ser	Leu	Thr	Leu	Ala	Ser	Phe	Ile	Leu	Val	Phe
				335					340					345
Phe	Val	Ala	Ser	Val	Gly	Val	Arg	Trp	Met	Ile	Gly	Val	Thr	Glu
				350					355					360
Ile	Asp	Lys	Gly	Ser	Ala	Tyr	Gly	Asn	Ser	Asp	Ser	Lys	Gln	Lys
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Leu	Asn	Asp												

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

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 gacctgtttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatoga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500
 acagggtacc tttagtgggt gccaatctgg gcatgtctga acaactgggt 550
 tataaaaactg tatcaggttc ctgtatgtcc actggtttta gcgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aattttcttc 900
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actacaacca ccactctgat gtagtagaca atctgacctt aatggtagaa 1000
cacactgaca ttcttgaagc tagtccagct agtacaccac aaatcattaa 1050
gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100
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aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158
<211> 409
<212> PRT
<213> Homo sapiens

<400> 158
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Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu
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Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
35 40 45
Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
50 55 60
Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Ile
65 70 75
Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
80 85 90
Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
95 100 105

Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn
 110 115
 Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu
 125 130 135
 Thr Pro Ser Ile Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu
 140 145 150
 His Ser Leu Tyr Lys Pro Gln Lys Gly Leu Phe His Arg Val Pro
 155 160 165
 Leu Val Val Ala Asn Leu Gly Met Ser Glu Gln Leu Gly Tyr Lys
 170 175 180
 Thr Val Ser Gly Ser Cys Met Ser Thr Gly Phe Ser Arg Ala Val
 185 190 195
 Gln Thr His Ser Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys
 200 205 210
 Glu Val His Lys Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu
 215 220 225
 Leu Lys Ser Ile Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val
 230 235 240
 Asp Lys Leu Val Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu
 245 250 255
 Lys Arg Arg Gly Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile
 260 265 270
 Gln Lys Asp Pro Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg
 275 280 285
 Thr Phe Phe Pro Asn Ser Glu Phe Leu His Ser Cys Val Met Ser
 290 295 300
 Leu Lys Asn Arg His Val Ser Lys Ser Ser Cys Asn Tyr Asn His
 305 310 315
 His Leu Asp Val Val Asp Asn Leu Thr Leu Met Val Glu His Thr
 320 325 330
 Asp Ile Pro Glu Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys
 335 340 345
 His Lys Ala Leu Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Ser
 350 355 360
 Arg Leu Leu Asp Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly
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 Ser Ser Asn Gln Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr
 380 385 390
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 Ser Pro Thr Phe

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
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 c 2651

<210> 160
 <211> 556
 <212> PRT
 <213> Homo sapiens

<400> 160
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 Ser Glu Val Arg Arg Leu Tyr Val Ser Lys Gly Phe Asn Lys Asn

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Asp Ala Pro Leu	His Glu Ile Asn Gly Asp 50	His Leu Lys Ile Cys 55	60
Pro Gln Gly Ser	Thr Cys Cys Ser Gln 65	Glu Met Glu Glu Lys Tyr 70	75
Ser Leu Gln Ser	Lys Asp Asp Phe Lys 80	Ser Val Val Ser Glu Gln 85	90
Cys Asn His Leu	Gln Ala Val Phe Ala 95	Ser Arg Tyr Lys Lys Phe 100	105
Asp Glu Phe Phe	Lys Glu Leu Leu Glu 110	Asn Ala Glu Lys Ser Leu 115	120
Asn Asp Met Phe	Val Lys Thr Tyr Gly 125	His Leu Tyr Met Gln Asn 130	135
Ser Glu Leu Phe	Lys Asp Leu Phe Val 140	Glu Leu Lys Arg Tyr Tyr 145	150
Val Val Gly Asn	Val Asn Leu Glu Glu 155	Met Leu Asn Asp Phe Trp 160	165
Ala Arg Leu Leu	Glu Arg Met Phe Arg 170	Leu Val Asn Ser Gln Tyr 175	180
His Phe Thr Asp	Glu Tyr Leu Glu Cys 185	Val Ser Lys Tyr Thr Glu 190	195
Gln Leu Lys Pro	Phe Gly Asp Val Pro 200	Arg Lys Leu Lys Leu Gln 205	210
Val Thr Arg Ala	Phe Val Ala Ala Arg 215	Thr Phe Ala Gln Gly Leu 220	225
Ala Val Ala Gly	Asp Val Val Ser Lys 230	Val Ser Val Val Asn Pro 235	240
Thr Ala Gln Cys	Thr His Ala Leu Leu 245	Lys Met Ile Tyr Cys Ser 250	255
His Cys Arg Gly	Leu Val Thr Val Lys 260	Pro Cys Tyr Asn Tyr Cys 265	270
Ser Asn Ile Met	Arg Gly Cys Leu Ala 275	Asn Gln Gly Asp Leu Asp 280	285
Phe Glu Trp Asn	Asn Phe Ile Asp Ala 290	Met Leu Met Val Ala Glu 295	300
Arg Leu Glu Gly	Pro Phe Asn Ile Glu 305	Ser Val Met Asp Pro Ile 310	315
Asp Val Lys Ile	Ser Asp Ala Ile Met 320	Asn Met Gln Asp Asn Ser 325	330
Val Gln Val Ser	Gln Lys Val Phe Gln 335	Gly Cys Gly Pro Pro Lys 340	345
Pro Leu Pro Ala	Gly Arg Ile Ser Arg 350	Ser Ile Ser Glu Ser Ala 355	360

<400> 162
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 <210> 163
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 163
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 <210> 164
 <211> 870
 <212> DNA
 <213> Homo sapiens

 <400> 164
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 cgatgaaagt tctaattctt tcctctctcc tgttgctgcc actaatgctg 200
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 gtgagtgcaa agattgggtc ctgagagccc cgagaagaaa attcatgaca 350
 gtgtctgggc tgccaaaagaa gcagtgcctc tgtgatcatt tcaaggggaa 400
 tgtgaagaaa acaagacacc aaaggcacca cagaagacca aacaagcatt 450
 ccagagcctg ccagcaattt ctcaacaat gtcagctaag aagctttgct 500
 ctgcctttgt aggagctctg agcgccact cttccaatta aacattctca 550
 gccagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600
 actctccac tgtaccacc cctaaatcat tccagtgtc tcaaaaagca 650
 tgtttttcaa gatcattttg ttgttgctc tctctagtgt cttcttctct 700
 cgtcagttct agcctgtgcc ctccccttac ccaggttag gcttaattac 750
 ctgaaagatt ccaggaaact gtgcttctct agctagtgtc atttaacctt 800
 aaatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850
 tcaaaaaaaaa aaaaaaaaaa 870

 <210> 165
 <211> 119
 <212> PRT
 <213> Homo sapiens

 <400> 165
 Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met	Val Ser Ser Ser	Leu Asn Pro Gly Val Ala	Arg
	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala Ser Arg	Arg Trp Leu Gln	Glu
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys Asp Trp	Phe Leu Arg Ala	Pro
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser Gly Leu	Pro Lys Lys Gln	Cys
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn Val Lys	Lys Thr Arg His	Gln
	80	85	90
Arg His His Arg	Lys Pro Asn Lys His Ser Arg	Ala Cys Gln	Gln
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg Ser Phe	Ala Leu Pro Leu	
	110	115	

<210> 166
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 166
 aatggctgtc ttagtacttc gcctgacagt tgtctctggga ctgcttgtct 50
 tattctgtac ctgctatgca gacgacaaac cagacaaacc agacgacaag 100
 ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
 cctctctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
 ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
 cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcttggaaca 300
 tccaagagca gccaaatcct gcttttccag ttgggtcca caagtctctc 350
 aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
 tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
 ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
 agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 a 551

<210> 167
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu
 1 5 10 15
 Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro

	20		25		30
Asp Asp Lys Pro	Asp Asp Ser Gly Lys Asp	Pro Lys Pro Asp Phe			
	35	40			45
Pro Lys Phe Leu	Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala				
	50	55			60
Val Glu Phe Ile	Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met				
	65	70			75
Glu Phe Asp Asp	Asn Glu Gly Lys His Ser Ser Lys				
	80	85			

<210> 168
 <211> 1371
 <212> DNA
 <213> Homo sapiens

<400> 168
 ggacgcccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50
 ggaagcacag ctccagagctg gtctgccatg gacatcctgg tcccactcct 100
 gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
 tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
 gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
 cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
 tggagctggg ctgcggaacc ggagccaact ttcagtctta ccaccgggc 350
 tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
 aaagagcatg gctgagaaca ggcacctcca atatgagcgg ttgtgtgtg 450
 ctcttgagga ggacatgaga cagctggctg atggctccat ggatgtgtgtg 500
 gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550
 ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600
 atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
 gagcccacct ggaacacat tggggatggc tgctgcctca ccagagagac 700
 ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
 gctgtcaaac aatctttccc aagctccaag gcaactattt gctccttccc 850
 cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900
 gagggaaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgccttc 1000
 gacagtga aaagctctact tctacgtga cccaggaggg aaacactagg 1050
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gctcctctcg 1150
 ctttctctct gaggtctacac ccatgcgtct cttaggaactg gtcacaaaag 1200
 tcatggtgcc tgcataccctg ccaagccccc ctgaccctct ctcgccacta 1250
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
 atgccagagc aagactcaa gaggcagagg ttttgttctc aaatattttt 1350
 taataaatag acgaaaccac g 1371

<210> 169
 <211> 277
 <212> PRT
 <213> Homo sapiens

<400> 169
 Met Asp Ile Leu Val Pro Leu Leu Gln Leu Leu Val Leu Leu Leu
 1 5 10 15
 Thr Leu Pro Leu His Leu Met Ala Leu Leu Gly Cys Trp Gln Pro
 20 25 30
 Leu Cys Lys Ser Tyr Phe Pro Tyr Leu Met Ala Val Leu Thr Pro
 35 40 45
 Lys Ser Asn Arg Lys Met Glu Ser Lys Lys Arg Glu Leu Phe Ser
 50 55 60
 Gln Ile Lys Gly Leu Thr Gly Ala Ser Gly Lys Val Ala Leu Leu
 65 70 75
 Glu Leu Gly Cys Gly Thr Gly Ala Asn Phe Gln Phe Tyr Pro Pro
 80 85 90
 Gly Cys Arg Val Thr Cys Leu Asp Pro Asn Pro His Phe Glu Lys
 95 100 105
 Phe Leu Thr Lys Ser Met Ala Glu Asn Arg His Leu Gln Tyr Glu
 110 115 120
 Arg Phe Val Val Ala Pro Gly Glu Asp Met Arg Gln Leu Ala Asp
 125 130 135
 Gly Ser Met Asp Val Val Val Cys Thr Leu Val Leu Cys Ser Val
 140 145 150
 Gln Ser Pro Arg Lys Val Leu Gln Glu Val Arg Arg Val Leu Arg
 155 160 165
 Pro Gly Gly Val Leu Phe Phe Trp Glu His Val Ala Glu Pro Tyr
 170 175 180
 Gly Ser Trp Ala Phe Met Trp Gln Gln Val Phe Glu Pro Thr Trp
 185 190 195
 Lys His Ile Gly Asp Gly Cys Cys Leu Thr Arg Glu Thr Trp Lys
 200 205 210
 Asp Leu Glu Asn Ala Gln Phe Ser Glu Ile Gln Met Glu Arg Gln
 215 220 225

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240
 Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255
 Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270
 Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 170
 gtgggattta tttgagtgc agatcggttt ctcagtggtg gtggaagttg 50
 cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100
 agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
 agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
 ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
 aaggaaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
 ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
 cctgtggtca tgcctgcato tgaagacagg cttggggggg ccattgcagc 400
 tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450
 ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgat 500
 tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaactttt 550
 ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
 taacctttgc aaggttctac ttgccaatc ttggtcccag cgcaaagaag 650
 gccatatata tggatgatga tgtaattgtg caagtgata ttcttgccct 700
 ttacaatata gcaactgaagc caggacatgc agctgcattt tcagaagatt 750
 gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
 aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
 catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900
 tgacggaatg gaaacgacag aatataacta accaactgga aaatgggatg 950
 aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000
 cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
 atcctatgtg gaatgtccgc caccttggtt ccagtgctgg aaaacgatat 1100
 tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatgg 1200
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 atctcaaca taaagtgaag cagaatttga actgtaagca agcattttctc 1300
 aggaagtccct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaaag 1400
 atgacaaact gccctgtctg gcagtcagct tccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaac ttacattttt c 1621

<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171
 Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val
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 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser
 20 25 30
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro
 35 40 45
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp
 50 55 60
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp
 65 70 75
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn
 80 85 90
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr
 95 100 105
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser
 110 115 120
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly
 125 130 135
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu
 140 145 150
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys
 155 160 165
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile
 170 175 180
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

	185		190		195
Phe Ser Glu Asp	Cys Asp Ser Ala Ser	Thr Lys Val Val Ile	Arg		
	200		210		
Gly Ala Gly Asn	Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr	Lys		
	215		225		
Lys Glu Arg Ile	Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys	Ser		
	230		235		
Phe Asn Pro Gly	Val Phe Val Ala Asn	Leu Thr Glu Trp Lys	Arg		
	245		250		
Gln Asn Ile Thr	Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn	Val		
	260		265		
Glu Glu Gly Leu	Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr	Thr		
	275		280		
Pro Pro Leu Leu	Ile Val Phe Tyr Gln	Gln His Ser Thr Ile	Asp		
	290		295		
Pro Met Trp Asn	Val Arg His Leu Gly	Ser Ser Ala Gly Lys	Arg		
	305		310		
Tyr Ser Pro Gln	Phe Val Lys Ala Ala	Lys Leu Leu His Trp	Asn		
	320		325		
Gly His Leu Lys	Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp	Val		
	335		340		
Trp Glu Lys Trp	Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn	Leu		
	350		355		
Ile Arg Arg Tyr	Thr Glu Ile Ser Asn	Ile Lys			
	365		370		

<210> 172
 <211> 585
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> unsure
 <222> 71, 76, 86, 91, 162, 220, 269, 281
 <223> unknown base

<400> 172
 tggtttttgc ccataaatt ccctcagctt gacgagtttg ttaaggaatg 50
 aggttacaga ttcaggaatt ntaggncctc aacctntaga ntttgtccca 100
 aatgtttctcc gacatgcagt agatgggaga caagaggaga ttctgtggt 150
 catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200
 gcattcagca caaactcogn tccaatgtga ttttctacat tgttactctc 250
 aacaatacag cagacatnt cggctcctgg ntcaacagtg attccctgaa 300
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
 gcaagggttct acttgccaat tctgggtccc agcgcaaaga aggccatata 450
 catggatgat gatgtaattg tgcaagggtga tattotttgc ctttacaata 500
 cagcactgaa gccaggacat gcagctgcat ttccagaaga ttgtgattca 550
 gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173
 <211> 1866
 <212> DNA
 <213> Homo sapiens

<400> 173
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 aacgcgggcg gccagacaac gggtgggctc ccggggcctg cggcgccggc 150
 gctgagctgg cagggcgggg cggggcgccg gctgcatccg catctcctcc 200
 atcgctctga gtaagggcgg ccgcggcgag cctttgaggg gaacgacttg 250
 tcggagccct aaccaggggt gtctctgagc ctgggtgggt ccccgagcgc 300
 tcacatcact ttccgatcac ttcaaatggt ttaaaaacta atatttatat 350
 gacagaagaa aaagatgtca ttccgtaaaag taacacatcat catcttggtc 400
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 tcaacctata ggactttgtc ccaaagtgtc tccgacatgc agtagatggg 550
 agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcttgg 600
 gggggccatt gcagctataa acagcattca gcacaacact cgtccaatg 650
 tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
 tgggctcaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
 ttgaccctaa acttttgga ggaagagtaa aggaggatcc tgaccagggg 800
 gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
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 ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
 tgcattttca gaagattgtg attcagcctc tactaaagtt gtcacccgtg 1000
 gaggcaggaa ccagtacaat tacattggct atcttgacta taaaaggaa 1050
 agaattcgta agctttccat gaaagccagc acttgctcat ttaactcctg 1100
 agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
 aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
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 gtgctgaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350
 cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
 tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450
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 tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
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 tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
 aacctgtggc ctgatctgta aataaaaact acatttttca ataggtaaaa 1850
 aaaaaaaaa aaaaaa 1866

<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
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 gtcattggggg cagccatctc ccagggggcc ctcategccca tcgtctgcaa 200
 oggtctcgtg ggctttctgc tgcgtgctgct ctgggtcacc ctctgctggg 250
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 agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
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 agtggcccta aggagatggg cctgggggtgg gggcttatga gttggtgcta 600
 gagccagggc catctggact atgctccacc ccaagggcca agggctcaggg 650
 gccgggtcca ctctttccct aggctgagca cctctagggc ctctagggtt 700
 gggaaagcaa ctggaaccca tggcaataat aggggggtgt ccaggctggg 750

ccctccctcct ggtcctccca gtgtttgctg gataataaat ggaactatgg 800
ctctaaaaaa aaaaaaaaaa aaa 823

<210> 175
<211> 87
<212> PRT
<213> Homo sapiens

<400> 175
Met Gly Ala Ala Ile Ser Gln Gly Ala Leu Ile Ala Ile Val Cys
1 5 10 15
Asn Gly Leu Val Gly Phe Leu Leu Leu Leu Leu Trp Val Ile Leu
20 25 30
Cys Trp Ala Cys His Ser Arg Leu Pro Thr Leu Thr Leu Ser Leu
35 40 45
Asn Pro Val Pro Thr Pro Ala Leu Ala Pro Val Leu Arg Arg Pro
50 55 60
His His Pro Arg Ser Pro Ala Met Lys Ala Ala Thr Cys Cys Ser
65 70 75
Pro Glu Gly Pro Trp Pro Ser Leu Glu Pro Arg Thr
80 85

<210> 176
<211> 1660
<212> DNA
<213> Homo sapiens

<400> 176
gtttgaattc cttcaactat acccacagtc caaaagcaga ctactgtgt 50
cccaggctac cagttcctcc aagcaagtca ttcccttat ttaaccgatg 100
tgtccctcaa acacctgagt gctactccct atttgcattc gtttgataa 150
atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200
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aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcacacagg 450
cagtgctgct cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500
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tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcccagggt 650
atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700
gtggtgtgac catttaattg gcctcatctg gactagttaa ttcatccttg 750

	95		100		105
Glu Leu Phe Gln	Ile Thr Asn Lys Ala	Ile Ser Ser Ala Pro	Phe		
	110		115		120
Leu Leu Phe Gln	Pro Leu Trp Thr Phe	Ala Ile Leu Ile Phe	Phe		
	125		130		135
Trp Val Leu Trp	Val Ala Val Leu Leu	Ser Leu Gly Thr Ala	Gly		
	140		145		150
Ala Ala Gln Val	Met Glu Gly Gly Gln	Val Glu Tyr Lys Pro	Leu		
	155		160		165
Ser Gly Ile Arg	Tyr Met Trp Ser Tyr	His Leu Ile Gly Leu	Ile		
	170		175		180
Trp Thr Ser Glu	Phe Ile Leu Ala Cys	Gln Gln Met Thr Ile	Ala		
	185		190		195
Gly Ala Val Val	Thr Cys Tyr Phe Asn	Arg Ser Lys Asn Asp	Pro		
	200		205		210
Pro Asp His Pro	Ile Leu Ser Ser Leu	Ser Ile Leu Phe Phe	Tyr		
	215		220		225
His Gln Gly Thr	Val Val Lys Gly Ser	Phe Leu Ile Ser Val	Val		
	230		235		240
Arg Ile Pro Arg	Ile Ile Val Met Tyr	Met Gln Asn Ala Leu	Lys		
	245		250		255
Glu Gln Gln His	Gly Ala Leu Ser Arg	Tyr Leu Phe Arg Cys	Cys		
	260		265		270
Tyr Cys Cys Phe	Trp Cys Leu Asp Lys	Tyr Leu Leu His Leu	Asn		
	275		280		285
Gln Asn Ala Tyr	Thr Thr Thr Ala Ile	Asn Gly Thr Asp Phe	Cys		
	290		295		300
Thr Ser Ala Lys	Asp Ala Phe Lys Ile	Leu Ser Lys Asn Ser	Ser		
	305		310		315
His Phe Thr Ser	Ile Asn Cys Phe Gly	Asp Phe Ile Ile Phe	Leu		
	320		325		330
Gly Lys Val Leu	Val Val Cys Phe Thr	Val Phe Gly Gly Leu	Met		
	335		340		345
Ala Phe Asn Tyr	Asn Arg Ala Phe Gln	Val Trp Ala Val Pro	Leu		
	350		355		360
Leu Leu Val Ala	Phe Phe Ala Tyr Leu	Val Ala His Ser Phe	Leu		
	365		370		375
Ser Val Phe Glu	Thr Val Leu Asp Ala	Leu Phe Leu Cys Phe	Ala		
	380		385		390
Val Asp Leu Glu	Thr Asn Asp Gly Ser	Ser Glu Lys Pro Tyr	Phe		
	395		400		405
Met Asp Gln Glu	Phe Leu Ser Phe Val	Lys Arg Ser Asn Lys	Leu		

atctgaagac agccatagag aaaattactc agagaggagg acttttcta 1300
 gtaggtcggg ccatctcctt tgtgaccaag aacttctttt ccaagccaa 1350
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 ggccacacga caaagtggag gaggttcaa gacttgcgag agagtcagga 1450
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<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
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			20						25					30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
			35						40					45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
			50						55					60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
			65						70					75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
			80						85					90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg
			95						100					105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly
			110						115					120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val
			125						130					135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
			140						145					150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
			155						160					165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln
			170						175					180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala
			185						190					195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
			200						205					210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu
			215						220					225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg
			230						235					240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala
			245						250					255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val
			260						265					270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu
			275						280					285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

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Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Ile	Gln	Lys	Gln	Leu	
				305					310					315	
Leu	Ala	Asp	Val	Ala	Gln	Ala	Leu	Asp	Ile	Gly	Pro	Ala	Gly	Pro	
				320					325					330	
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe	
				335					340					345	
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile	
				350					355					360	
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala	
				365					370					375	
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn	
				380					385					390	
Arg	Ser	Gly	Ala	Pro	Asn	Val	Val	Val	Val	Met	Val	Asp	Gly	Trp	
				395					400					405	
Pro	Thr	Asp	Lys	Val	Glu	Glu	Ala	Ser	Arg	Leu	Ala	Arg	Glu	Ser	
				410					415					420	
Gly	Ile	Asn	Ile	Phe	Phe	Ile	Thr	Ile	Glu	Gly	Ala	Ala	Glu	Asn	
				425					430					435	
Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val	
				440					445					450	
Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe	
				455					460					465	
Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp	
				470					475					480	
Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp	
				485					490					495	
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn	
				500					505					510	
Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe	
				515					520					525	
Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr	
				530					535					540	
Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys	
				545					550					555	
Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly	
				560					565					570	
Gly	Thr	Ser	Thr	Gly	Ala	Ala	Ile	Asn	Phe	Ala	Leu	Glu	Gln	Leu	
				575					580					585	
Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile	
				590					595					600	
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala	

605	610	615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp	
620	625	630
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg	
635	640	645
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr	
650	655	660
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln	
665	670	675
Pro Arg Asn		

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 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
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 gcgctgctgc ctacagacca tggtgcgcca ggtcccgacg gctccgcgcc 150
 agatcccgcc cactacagtt ttctctgac tctaattgat gcactggaca 200
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggtggaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggcctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaata ctctctccag ccttcagac 450
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 ggaccttcct caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
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ggggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
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tgaaatacct ctactcctg tttgacccaa ccaacttcac ccacaacaat 1300
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atcataaaa 1759

<210> 181
<211> 541
<212> PRT
<213> Homo sapiens

<400> 181
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Leu Pro Gln His His Gly Ala Pro Gly Pro Asp Gly Ser Ala Pro
20 25 30
Asp Pro Ala His Tyr Ser Phe Ser Leu Thr Leu Ile Asp Ala Leu
35 40 45
Asp Thr Leu Leu Ile Leu Gly Asn Val Ser Glu Phe Gln Arg Val
50 55 60
Val Glu Val Leu Gln Asp Ser Val Asp Phe Asp Ile Asp Val Asn
65 70 75
Ala Ser Val Phe Glu Thr Asn Ile Arg Val Val Gly Gly Leu Leu
80 85 90
Ser Ala His Leu Leu Ser Lys Lys Ala Gly Val Glu Val Glu Ala
95 100 105
Gly Trp Pro Cys Ser Gly Pro Leu Leu Arg Met Ala Glu Glu Ala
110 115 120
Ala Arg Lys Leu Leu Pro Ala Phe Gln Thr Pro Thr Gly Met Pro

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu Met			
	455	460			465
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser Arg	Ser Lys Phe Gln Lys			
	470	475			480
Asn Thr Val Ser	Ser Gly Pro Trp Glu Pro	Pro Ala Arg Pro Gly			
	485	490			495
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg Lys			
	500	505			510
Pro Ala Lys Gln	Lys Val Pro Leu Leu Ser Cys	Pro Ser Gln Pro			
	515	520			525
Phe Thr Ser Lys	Leu Ala Leu Leu Gly Gln Val	Phe Leu Asp Ser			
	530	535			540
Ser					

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
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 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacocaa 250
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 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183
 <211> 311
 <212> PRT
 <213> Homo sapiens

 <220>
 <221> Signal peptide
 <222> 1-29
 <223> Signal peptide

 <220>
 <221> N-glycosylation sites
 <222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

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Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
			20					25					30	

Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
			35					40					45	

Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
			50					55					60	

Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
			65					70					75	

Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
			80					85					90	

Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
			95					100					105	

Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
			110					115					120	

Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
			125					130					135	

Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
			140					145					150	

His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
			155					160					165	

Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val
			170					175					180	

Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met
			185					190					195	

Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys
			200					205					210	

Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu
			215					220					225	

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250
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 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
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 ttgtgacctt ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
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 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggctcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
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<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
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aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
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aggggcttg gacccaactg tgtcagtga ggaggtcaga cccagatca 550
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ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tgggggtgac 650
 caatgcgaac tcaaatgggtg cttcaaaggg agagaccac tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaataatc 750
 tagtatattg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag cgcatacgaa cgtcttgcca 850
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 aggctctctg aaactgggac caatgattac ctcatagggc tgtgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgcca gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcataata accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagcogatga taatccaggc 1100
 caaagggtta gttgttgtaa ttctctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgcataaaaa 1200
 taaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
 Met Val Ala Ala Thr Val Ala Ala Ala Trp Leu Leu Leu Trp Ala
 1 5 10 15
 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala
 20 25 30
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

ctctgcaaa gtagccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgtctcatg cagttggcca ccgccaggc gggcatcatt ctggtgtctg 500
 tgaaccacagc ctaccaggct atggaactgg agtatgtcct caagaagggt 550
 ggctgcgaagg cccttgtgtt cccaagcaa ttaagacc agcaatacta 600
 caacgtctctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcct ctcggtggat 700
 gcccttttc cggggacctt gtcctggat gaagtgttg cggtggcag 750
 cacacggcag catctggacc agctccaata caaccagcag ttctgtctct 800
 gccatgaccc catcaacate cagttcacct cggggacaac aggcagcccc 850
 aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
 tcctgcccaa cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000
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 atggtacccc cagcatgttc gtggacattc tgaaccagcc agacttctcc 1150
 agttatgaca tctcgacct gtgtggagg gtccattgct ggtcccctgc 1200
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
 tgggtggttc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300
 ttccctgagg aactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gaggcccgga tcatgaacat ggaggcagg acgctggcaa 1400
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 taccgccgag agctcgagga cttctttcac acacaccgga aggtgcagga 1650
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 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctatgatgcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactgcgctg ggcacaaggt gccaaaaaggc aggcagcctg cccaggccct 2100
ccctcctgtc catcccccac attccctgtg ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaa 2187

<210> 194
<211> 615
<212> PRT
<213> Homo sapiens

<400> 194
Met Ala Val Tyr Val Gly Met Leu Arg Leu Gly Arg Leu Cys Ala
1 5 10 15
Gly Ser Ser Gly Val Leu Gly Ala Arg Ala Ala Leu Ser Arg Ser
20 25 30
Trp Gln Glu Ala Arg Leu Gln Gly Val Arg Phe Leu Ser Ser Arg
35 40 45
Glu Val Asp Arg Met Val Ser Thr Pro Ile Gly Gly Leu Ser Tyr
50 55 60
Val Gln Gly Cys Thr Lys Lys His Leu Asn Ser Lys Thr Val Gly
65 70 75
Gln Cys Leu Glu Thr Thr Ala Gln Arg Val Pro Glu Arg Glu Ala
80 85 90
Leu Val Val Leu His Glu Asp Val Arg Leu Thr Phe Ala Gln Leu
95 100 105
Lys Glu Glu Val Asp Lys Ala Ala Ser Gly Leu Leu Ser Ile Gly
110 115 120
Leu Cys Lys Gly Asp Arg Leu Gly Met Trp Gly Pro Asn Ser Tyr
125 130 135
Ala Trp Val Leu Met Gln Leu Ala Thr Ala Gln Ala Gly Ile Ile
140 145 150
Leu Val Ser Val Asn Pro Ala Tyr Gln Ala Met Glu Leu Glu Tyr
155 160 165
Val Leu Lys Lys Val Gly Cys Lys Ala Leu Val Phe Pro Lys Gln
170 175 180
Phe Lys Thr Gln Gln Tyr Tyr Asn Val Leu Lys Gln Ile Cys Pro
185 190 195
Glu Val Glu Asn Ala Gln Pro Gly Ala Leu Lys Ser Gln Arg Leu
200 205 210
Pro Asp Leu Thr Thr Val Ile Ser Val Asp Ala Pro Leu Pro Gly
215 220 225
Thr Leu Leu Leu Asp Glu Val Val Ala Ala Gly Ser Thr Arg Gln
230 235 240
His Leu Asp Gln Leu Gln Tyr Asn Gln Gln Phe Leu Ser Cys His

					245					250					255
Asp	Pro	Ile	Asn	Ile	Gln	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Ser	Pro	
				260					265					270	
Lys	Gly	Ala	Thr	Leu	Ser	His	Tyr	Asn	Ile	Val	Asn	Asn	Ser	Asn	
				275					280					285	
Ile	Leu	Gly	Glu	Arg	Leu	Lys	Leu	His	Glu	Lys	Thr	Pro	Glu	Gln	
				290					295					300	
Leu	Arg	Met	Ile	Leu	Pro	Asn	Pro	Leu	Tyr	His	Cys	Leu	Gly	Ser	
				305					310					315	
Val	Ala	Gly	Thr	Met	Met	Cys	Leu	Met	Tyr	Gly	Ala	Thr	Leu	Ile	
				320					325					330	
Leu	Ala	Ser	Pro	Ile	Phe	Asn	Gly	Lys	Lys	Ala	Leu	Glu	Ala	Ile	
				335					340					345	
Ser	Arg	Glu	Arg	Gly	Thr	Phe	Leu	Tyr	Gly	Thr	Pro	Thr	Met	Phe	
				350					355					360	
Val	Asp	Ile	Leu	Asn	Gln	Pro	Asp	Phe	Ser	Ser	Tyr	Asp	Ile	Ser	
				365					370					375	
Thr	Met	Cys	Gly	Gly	Val	Ile	Ala	Gly	Ser	Pro	Ala	Pro	Pro	Glu	
				380					385					390	
Leu	Ile	Arg	Ala	Ile	Ile	Asn	Lys	Ile	Asn	Met	Lys	Asp	Leu	Val	
				395					400					405	
Val	Ala	Tyr	Gly	Thr	Thr	Glu	Asn	Ser	Pro	Val	Thr	Phe	Ala	His	
				410					415					420	
Phe	Pro	Glu	Asp	Thr	Val	Glu	Gln	Lys	Ala	Glu	Ser	Val	Gly	Arg	
				425					430					435	
Ile	Met	Pro	His	Thr	Glu	Ala	Arg	Ile	Met	Asn	Met	Glu	Ala	Gly	
				440					445					450	
Thr	Leu	Ala	Lys	Leu	Asn	Thr	Pro	Gly	Glu	Leu	Cys	Ile	Arg	Gly	
				455					460					465	
Tyr	Cys	Val	Met	Leu	Gly	Tyr	Trp	Gly	Glu	Pro	Gln	Lys	Thr	Glu	
				470					475					480	
Glu	Ala	Val	Asp	Gln	Asp	Lys	Trp	Tyr	Trp	Thr	Gly	Asp	Val	Ala	
				485					490					495	
Thr	Met	Asn	Glu	Gln	Gly	Phe	Cys	Lys	Ile	Val	Gly	Arg	Ser	Lys	
				500					505					510	
Asp	Met	Ile	Ile	Arg	Gly	Gly	Glu	Asn	Ile	Tyr	Pro	Ala	Glu	Leu	
				515					520					525	
Glu	Asp	Phe	Phe	His	Thr	His	Pro	Lys	Val	Gln	Glu	Val	Gln	Val	
				530					535					540	
Val	Gly	Val	Lys	Asp	Asp	Arg	Met	Gly	Glu	Glu	Ile	Cys	Ala	Cys	
				545					550					555	
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys	

	560		565		570
Ala Phe Cys Lys	Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr			
	575	580			
Ile Val Phe Val	Thr Asn Tyr Pro Leu Thr	Ile Ser Gly Lys Ile			
	590	595			600
Gln Lys Phe Lys	Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu			
	605	610			615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgccctgaa actgcatgag aagacaccag 50
 agcagttgag gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcattcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tttctgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc cgggatcatg aacatggagg 500
 cagggacgct ggcaaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctgggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacag agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg ccagggccat 50
 gatctggact gcaggctggc tgetgctgct gctgcttgcg ggaggagcgc 100
 agggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggcgtgg acgtctgcac 200
 cgaggccgtg ggggcgggtg agaccatcca cggacaattc tcgctggcag 250
 tgccgggttg cggttcggga ctcccggca agaataccg cgccctggat 300
 cttcacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac cggcaggtta 400
 atgagagtgc ataccggccc aacggcgtgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgccca gggatcatcg ccgcggctcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggctg ctctgacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattot gactcggga tggagtaaca ggcccagggt tcaagctcag 650
 tggctcctgt tgccaggggt ccgcgtgtaa ctctgacctc cgcaacaaga 700
 cctacttctc cctcgaate ccaccccttg tcgggtgccc cctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcggcccc 800
 agtgagaccc acatccacca ccaaaccat gccagcgcca accagtca 850
 ctccgagaca gggagtagaa cagaggcct ccggggatga ggagcccagg 900
 ttgactggag gcgcgcgtgg ccaccaggac cgcagcaatt cagggcagta 950
 tctgcacaaa gggggggccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgcta 1050
 ctgtgagctt ctccacctgg aaatttcctt ctcacctact tctctggccc 1100
 tgggtacccc tcttctcacc acttctgtt ccaccactg gactgggctg 1150
 gccacgcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgc 1300
 tctccgcttg tcctcttgg atgttaggac agagtggag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gttcctact cactttctcc 1400
 tagccagcct ggaactttga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgccctccct actccccgca tctttgggga atcggttccc 1500
 catatgtott ccttactaga ctgtgagctc ctgagggggg ggcccggtag 1550
 ccaattcgcc ctatagttag tggta 1575

<210> 197
 <211> 346
 <212> PRT
 <213> Homo sapiens

<400> 197
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr
 1 5 10 15
 Ala Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala
 20 25 30
 Leu Glu Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser

	35		40		45
Pro Asn Lys Met	Lys Thr Val Lys Cys	Ala Pro Gly Val Asp	Val		
	50		55		60
Cys Thr Glu Ala	Val Gly Ala Val Glu	Thr Ile His Gly Gln	Phe		
	65		70		75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly Leu Pro Gly Lys	Asn		
	80		85		90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln	Leu		
	95		100		105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala Lys Leu Asn Leu	Thr		
	110		115		120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu Ser Ala Tyr Pro	Pro		
	125		130		135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly Leu Ser Arg Glu	Ala		
	140		145		150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser Cys Tyr Asn Ala	Ser		
	155		160		165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly Asn Val Thr Leu	Thr		
	170		175		180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val Arg Gly Cys Val	Gln		
	185		190		195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr Gly Pro Gly Phe	Thr		
	200		205		210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg Cys Asn Ser Asp	Leu		
	215		220		225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile Pro Pro Leu Val	Arg		
	230		235		240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala Ser Thr Thr Ser	Val		
	245		250		255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro Thr Ser Thr Thr	Lys		
	260		265		270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro Arg Gln Gly Val	Glu		
	275		280		285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Arg Leu Thr Gly Gly	Ala		
	290		295		300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly Gln Tyr Pro Ala	Lys		
	305		310		315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly Cys Val Ala Pro	Thr		
	320		325		330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val Ala Ala Gly Val	Leu		
	335		340		345

Leu

03950456 11-101

175

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Glu
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gcctttgcct cagtgtattct caccctgcctc tcccttctgg 100

cagcaggagt ctcccagggt gttcttctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggtttg ccggccactc 200

atgagagtgt ttttgttaa agtatTTTTT agaatactgt tgactctctc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300

tcaacctcca aatttttgtt atactagatg gcttccattt acccaccact 350

attttaagggt ccttttattt ttaggttcaa ggttcatttg acttgagaaa 400

gtgcccttct gcagcttcat tgattttggt tatcttcaact attaatgtta 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagt atccacaaa tgtgattgtt 550

aattttaaag ttatttctaatt attagtacat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagggtggg ctagctcgcc 50
 gcttcggctc tggctgctgt tgttcctcct gccctcagcg cagggccgcc 100
 agaaggatgc aggttcaaaa tggaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggaggc atccacagg 250
 agatgatggc agaggtagtc agacggaagc tagggaccca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgtcc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaagt gatcgggcgt ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctcaggttcc taaatggatg 450
 gagcctgccca tccagtcctt ctccttcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttgga catcttgagg agggggacac gctgtttggc 550
 caatttatcc tacaggtcct ggacggtggg acctcttcag agaagatctg 600
 gtaaggctcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 ttcccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
 ctcgaaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaagatagc cttaggaaag ccagctgcta aggatgtcca 800
 tcttgtggat cactgcaaat acaagtatct gttaattttt cgaggcgtag 850
 ctgcaagttt ccggtttaaa cacctcttcc tgtgtggctc actgtttttc 900
 catgttgggt atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcactat atcccagtc aacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaaat gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgggca acagatctca 1250
 gatatactac ggtgagaagc ttaccataag cttggctcct atacctgaa 1300
 tatctgtat caagccaaat acctggtttt ctttatcatg ctgcaccag 1350
 agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctaccttc attttcttaa gaccaatcac agctgtgtcc 1500
 tcagatcaco cactgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg cctttgtcc cattatttg agcagaaaaa tgcctatttg 1600
 gaagtagtac aactcattgc tgggaatttg aaattattca aggcgtgatc 1650
 tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700
 cttggggatc attctotgaa tggctaaag aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcacga gtaattattg 1850
 caattggatt tcaggttccc tttttgtgcc ttcatgcctt acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
 caccoccca tttctcgcca tggcccctgc actgctcctg atccctgctg 50
 ccctcgctc tttcatcctg gcctttggca ccggagtggg gttcgtgcgc 100
 tttacctccc ttccggccact tcttggaggg atcccgagtg ctggtggctc 150
 ggatgcccgc cagggatggc tggctgccct gcaggaccgc agcatccttg 200
 cccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgcagc 350
 tggtgatgag gtactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc caccctgggtg ccgctcctct gctttgtgct 450
 ccatgtcatc tcttggtccc tcatcttttag catccttctc gtctttgact 500
 atgctgagct catgggcctc aaacagggtat actaccatgt gctggggctg 550
 ggcgagcctc tggccctgaa gtctccccgg gctctcagac tcttctccca 600
 cctgcgccac ccagtgtgtg tggagctgct gacagtgctg tgggtgggtg 650
 ctaccctggg cagggaccgt ctctcctctg ctctcctct tacctctac 700
 ctgggcctgg ctacggggtc tgatcagcaa gacctccgt acctccggcg 750
 ccagctacaa agaaaaactc acctgctctc tcggccccag gatggggagg 800
 cagagtggag agctcactct gggtacaagc cctgttcttc ctctccact 850
 gaattctaaa , tcttaacat ccaggccctg gctgcttcat gccagaggcc 900
 caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
 ctctgggtcc agctccatc cctaaattct gagtttcagc cactgaaact 1000
 caaggctcac ttctaccag caaggaagag tgggggatgg aagtcatctg 1050
 tcccttcaact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
 aaggaaagga tctgccctga ccaactccct ggcactgtta cttgctctg 1150
 cgctcagggt gtcccccttc gcaccgctgg ctccactcc aagaagggtg 1200
 accagggtct gcaagttcaa cggctatagc tgtccctcca ggccccaacc 1250
 ttgctcacc actccgggc ctagtctctg cacctcetta ggcctgcct 1300
 ctgggctcag accccaacct agtcaagggg attctcctg tcttaactcg 1350
 atgaactggg gctccctgct ctcccgagga agatgctctg caggaaaata 1400
 aaagtcagcc tttttctaaa aaaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207
 Met Ala Pro Ala Leu Leu Leu Ile Pro Ala Ala Leu Ala Ser Phe
 1 5 10 15
 Ile Leu Ala Phe Gly Thr Gly Val Glu Phe Val Arg Phe Thr Ser
 20 25 30
 Leu Arg Pro Leu Leu Gly Gly Ile Pro Glu Ser Gly Gly Pro Asp
 35 40 45
 Ala Arg Gln Gly Trp Leu Ala Ala Leu Gln Asp Arg Ser Ile Leu
 50 55 60
 Ala Pro Leu Ala Trp Asp Leu Gly Leu Leu Leu Phe Val Gly
 65 70 75
 Gln His Ser Leu Met Ala Ala Glu Arg Val Lys Ala Trp Thr Ser
 80 85 90
 Arg Tyr Phe Gly Val Leu Gln Arg Ser Leu Tyr Val Ala Cys Thr
 95 100 105
 Ala Leu Ala Leu Gln Leu Val Met Arg Tyr Trp Glu Pro Ile Pro
 110 115 120
 Lys Gly Pro Val Leu Trp Glu Ala Arg Ala Glu Pro Trp Ala Thr
 125 130 135
 Trp Val Pro Leu Leu Cys Phe Val Leu His Val Ile Ser Trp Leu
 140 145 150
 Leu Ile Phe Ser Ile Leu Leu Val Phe Asp Tyr Ala Glu Leu Met
 155 160 165
 Gly Leu Lys Gln Val Tyr Tyr His Val Leu Gly Leu Gly Glu Pro
 170 175 180
 Leu Ala Leu Lys Ser Pro Arg Ala Leu Arg Leu Phe Ser His Leu
 185 190 195
 Arg His Pro Val Cys Val Glu Leu Leu Thr Val Leu Trp Val Val
 200 205 210
 Pro Thr Leu Gly Thr Asp Arg Leu Leu Leu Ala Phe Leu Leu Thr
 215 220 225
 Leu Tyr Leu Gly Leu Ala His Gly Leu Asp Gln Gln Asp Leu Arg
 230 235 240
 Tyr Leu Arg Ala Gln Leu Gln Arg Lys Leu His Leu Leu Ser Arg
 245 250 255
 Pro Gln Asp Gly Glu Ala Glu
 260

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208
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gtagtccaca acagatctga gtgttttaaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcactt ggaattccac agttttctta 200
gtcccttgga ccoggttgac ctgttggtc ttcccgctgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaagaac cttcggctcg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgctcttcc 350
gagtaggatg tcaactgagat cctcaaatg gagctcctg ctgctgtcac 400
tctgagttt ctttgtgatg tggtaacctc gccctccoca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaatgc tctcatcaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcagacca ttagagttac ttgggggtgaa aaaaagcttt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac acctcttta tggtagacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacat 800
tatggcatc aggtgggtaa ctgagttttg ccccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcatcaata ctggcaattt agtgaagtat 900
cttttaaac taaaccactc agagaagttt ttacaggtt atcctctaat 950
tgataattat tctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaagggtg ttccctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggg gccaaagatc tatgaaatga tgggtcacgt 1100
aaaaccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
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ccacatgcca ttattaaact cacattctac aaaaagccta gaaggacagg 1350
atacctgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggctcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggagggt ttttgctaaa 1550
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaacaa 1650
 aacaatgtag agttttattt attgaacaat gtagtcactt gaagggtttg 1700
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaaagt 2000
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaatattt 2050
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209
 <211> 331
 <212> PRT
 <213> Homo sapiens

<400> 209
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 Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Ser Phe
 20 25 30
 Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu
 35 40 45
 Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg
 50 55 60
 Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His
 65 70 75
 Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp
 80 85 90
 Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys
 95 100 105
 Ser Trp Trp Gly Tyr Glu Val Leu Thr Phe Phe Leu Leu Gly Gln
 110 115 120
 Glu Ala Glu Lys Glu Asp Lys Met Leu Ala Leu Ser Leu Glu Asp
 125 130 135
 Glu His Leu Leu Tyr Gly Asp Ile Ile Arg Gln Asp Phe Leu Asp
 140 145 150
 Thr Tyr Asn Asn Leu Thr Leu Lys Thr Ile Met Ala Phe Arg Trp
 155 160 165

Val Thr Glu Phe Cys Pro Asn Ala Lys Tyr Val Met Lys Thr Asp
170 175 180

Thr Asp Val Phe Ile Asn Thr Gly Asn Leu Val Lys Tyr Leu Leu
185 190 195

Asn Leu Asn His Ser Glu Lys Phe Phe Thr Gly Tyr Pro Leu Ile
200 205 210

Asp Asn Tyr Ser Tyr Arg Gly Phe Tyr Gln Lys Thr His Ile Ser
215 220 225

Tyr Gln Glu Tyr Pro Phe Lys Val Phe Pro Pro Tyr Cys Ser Gly
230 235 240

Leu Gly Tyr Ile Met Ser Arg Asp Leu Val Pro Arg Ile Tyr Glu
245 250 255

Met Met Gly His Val Lys Pro Ile Lys Phe Glu Asp Val Tyr Val
260 265 270

Gly Ile Cys Leu Asn Leu Leu Lys Val Asn Ile His Ile Pro Glu
275 280 285

Asp Thr Asn Leu Phe Phe Leu Tyr Arg Ile His Leu Asp Val Cys
290 295 300

Gln Leu Arg Arg Val Ile Ala Ala His Gly Phe Ser Ser Lys Glu
305 310 315

Ile Ile Thr Phe Trp Gln Val Met Leu Arg Asn Thr Thr Cys His
320 325 330

Tyr

<210> 210
<211> 745
<212> DNA
<213> Homo sapiens

<400> 210
cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
gtgtgacctt ttggagtctt tctagctcct gccctagcta actataatat 100
caacgtcaat gatgacaaca acaatgcttg aagtgggcag cagtcagtga 150
gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
gactcctgga attocactct ggattatgga aatggctttg ctgcaaccag 250
actctttcaa aagaagacat gcattgtgca caaatgaac aaggaagtca 300
tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
ggtaagggac caggaggacc acctcccaag ggccgtgatgt actcagtcaa 400
cccaacaaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaacaa 450
tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
ctgttttttt actcaggaac gtgctacag accagtgtac tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaaca attttttaaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtggtt ttaccatgt cattctgaaa ttttctcta ctagttagt 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211
Met Lys Phe Thr Ile Val Phe Ala Gly Leu Leu Gly Val Phe Leu
1 5 10 15
Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
20 25 30
Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
35 40 45
His Asn Val Ala Asn Val Asp Asn Asn Gly Trp Asp Ser Trp
50 55 60
Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
65 70 75
Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
80 85 90
Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
95 100 105
Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
110 115 120
Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
125 130 135
Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
140 145 150
Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
155 160 165
Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
170 175 180
Asp Thr Val Glu Asn
185

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212
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tacagaagta tattaacttt ttaggagtaa ttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150
 tcctagtatt aaattcttat tgcctactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtcctc aatttttatgt aagcttcaga agaactgggt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagctctc gaaccaatgt gtttgttcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccggttgcaa 450
 ctctgcccca ttggtttctt ctttttggtta ctacagaaga ggaaatccag 500
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaattaaa agcaaaggga ttgaatccgg atggaaactc agccctttca 650
 accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700
 aaaagctgaa gagaatcac caatctccat taatgtgaag acagtcaaaa 750
 aagaacctga ggatagacaa caggcttcca aaagccctta caatgggtga 800
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtogatcgag 850
 gtcaagaaca cgatcacgtt ctatgcaca tactccaaga agacactata 900
 ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950
 tcccgcagtc acagtgaag ccctcgaaga catcataatc atggttctcc 1000
 tcaccttaag gccaaagcata ccagagatga tttaaaaagt tcaaacagac 1050
 atggtcataa aaggaaaaaa tctcgttctc gatctcagag caagtctcgg 1100
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150
 ggacaggcgt gaacgatctc gtcctttga gaggtcccat aaaagcaagc 1200
 accatggtgg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250
 ctctccttga gcctgcatca gttcttgggt ttgcctatct acagtgtgat 1300
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttggatt 1350
 cttgaaaccc tctaggtctc tagaactcag aggcagagtt cttttgaaaa 1400
 gaactatggt aatttttttg cacattaaaa tgccttagca gtatctaatt 1450
 aaaaaccatg gtcagggtca attgtacttt attatagttg tgtattgttt 1500
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 atacagataa aattgcagac actgttctat ttaagtgttt atttgtttaa 1600
 atgatgtga atactttctt aacactgggt tgtctgcatg tgtaagatt 1650
 tttacaagga aataaaatc aaatcttggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met Asn Asp Ser Leu Arg Thr Asn Val Phe Val Arg Phe Gln Pro
1 5 10 15

Glu Thr Ile Ala Cys Ala Cys Ile Tyr Leu Ala Ala Arg Ala Leu
20 25 30

Gln Ile Pro Leu Pro Thr Arg Pro His Trp Phe Leu Leu Phe Gly
35 40 45

Thr Thr Glu Glu Glu Ile Gln Glu Ile Cys Ile Glu Thr Leu Arg
50 55 60

Leu Tyr Thr Arg Lys Lys Pro Asn Tyr Glu Leu Leu Glu Lys Glu
65 70 75

Val Glu Lys Arg Lys Val Ala Leu Gln Glu Ala Lys Leu Lys Ala
80 85 90

Lys Gly Leu Asn Pro Asp Gly Thr Pro Ala Leu Ser Thr Leu Gly
95 100 105

Gly Phe Ser Pro Ala Ser Lys Pro Ser Ser Pro Arg Glu Val Lys
110 115 120

Ala Glu Glu Lys Ser Pro Ile Ser Ile Asn Val Lys Thr Val Lys
125 130 135

Lys Glu Pro Glu Asp Arg Gln Gln Ala Ser Lys Ser Pro Tyr Asn
140 145 150

Gly Val Arg Lys Asp Ser Lys Arg Ser Arg Asn Ser Arg Ser Ala
155 160 165

Ser Arg Ser Arg Ser Arg Thr Arg Ser Arg Ser Arg Ser His Thr
170 175 180

Pro Arg Arg His Tyr Asn Asn Arg Arg Ser Arg Ser Gly Thr Tyr
185 190 195

Ser Ser Arg Ser Arg Ser Arg Ser Arg Ser His Ser Glu Ser Pro
200 205 210

Arg Arg His His Asn His Gly Ser Pro Leu Lys Ala Lys His
215 220 225

Thr Arg Asp Asp Leu Lys Ser Ser Asn Arg His Gly His Lys Arg
230 235 240

Lys Lys Ser Arg Ser Arg Ser Gln Ser Lys Ser Arg Asp His Ser
245 250 255

Asp Ala Ala Lys Lys His Arg His Glu Arg Gly His His Arg Asp
260 265 270

Arg Arg Glu Arg Ser Arg Ser Phe Glu Arg Ser His Lys Ser Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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aggggtttat cattttttga anntattcgg gtcanaattg nctttgaaaa 100
gcattgcttt ttacagaaat atattancct tttagagtaa tttctagttt 150
ggattgtaat atgaaattat ttaaaagggc ttgcgtcata tatagggaaa 200
tcgcatatgg toctagtatt aaattnttat tgcttactga tttttttgag 250
ttaagagtg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagctcc aattttatgt aagcttcaga 350
agaactgggt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
ttacatgaat gacagctctg gaaccaatgt gttgttctga tttcaaccag 450
agantatagc atgtgcttgc atctacottg cagntagagc acttcagatt 500
cogttgcaa ctngtcccca ttgggttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaaacta tgaattactg gaaaaagaag tagaaaaag aaaagtagcc 650
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agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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ccacctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150
ctctgtaacg gcagtttgtt ccgatacaag caccctgtctg aggaggagct 200
tcgggccctg gcggggaagc cgaggccagc aggcaggaaa gagcggtggg 250
ccaattggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

tctcagctgg	agacctgcgc	cctcacgacc	gtggatgcc	tggtcctgcg	350
cttcttctcg	gagtagcagt	ggtttgtgga	ctttgctgtg	tactcgggcg	400
gcgtgtacct	cttcacagag	gcctactact	acatgctggg	accagccaag	450
gagactaaca	ttgctgtgtt	ctggtgcctg	ctcacggtga	ccttctccat	500
caagatgttc	ctgacagtga	cacggctgta	cttcagcgcc	gaggaggggg	550
gtgagcgctc	tgtctgcctc	acctttgect	tectcttctc	gctgctggcc	600
atgctggtgc	aagtgggtgc	ggaggagacc	ctcgagctgg	gcctggagcc	650
tggtctggcc	agcatgacc	agaacttaga	gccactctg	aagaagcagg	700
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ctctctggtt	gctggtggtg	ctgtgcctgc	tgcggtggcc	ggtgaccccg	1050
ccccacctgc	aggcctacct	gtgcctggcc	aaggcccggg	tggagcagct	1100
gcgaagggag	gctggccgca	tcaagcccg	tgaatccag	cagagggtgg	1150
tcagagtcta	ctgctatgtg	accggtgtga	gcttgtagta	cctgacgcgc	1200
ctcatcctca	ccctcaactg	cacacttctg	ctcaagacgc	tgggaggcta	1250
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ccagcgtctc	cccatcggc	cttggggagg	acgaagtcca	gcagactgca	1350
gcgcggattg	ccggggccct	gggtggcctg	cttactcccc	tcttctccg	1400
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cctgcagacc	ctcctggggc	cctgaggtct	gttctctggg	cagcgggaca	1550
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gccggaatcc	ccggcgttcc	cttcaccaca	gtgcctgacc	cgcgcccccc	1650
cttgagcgcc	gagtttctgc	ctcgaactg	tctctcctgg	gcccagcagc	1700
atgagggtcc	cgaggccatt	gtctccgaag	cgtatgtgcc	aggtttgagt	1750
ggcgagggtg	atgctggctg	ctcttctgaa	caaataaagg	agcatgccga	1800
tttttaa	1807				

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216
 Met Ala Val Leu Gly Val Gln Leu Val Val Thr Leu Leu Thr Ala
 1 5 10 15
 Thr Leu Met His Arg Leu Ala Pro His Cys Ser Phe Ala Arg Trp
 20 25 30
 Leu Leu Cys Asn Gly Ser Leu Phe Arg Tyr Lys His Pro Ser Glu
 35 40 45
 Glu Glu Leu Arg Ala Leu Ala Gly Lys Pro Arg Pro Arg Gly Arg
 50 55 60
 Lys Glu Arg Trp Ala Asn Gly Leu Ser Glu Lys Pro Leu Ser
 65 70 75
 Val Pro Arg Asp Ala Pro Phe Gln Leu Glu Thr Cys Pro Leu Thr
 80 85 90
 Thr Val Asp Ala Leu Val Leu Arg Phe Phe Leu Glu Tyr Gln Trp
 95 100 105
 Phe Val Asp Phe Ala Val Tyr Ser Gly Gly Val Tyr Leu Phe Thr
 110 115 120
 Glu Ala Tyr Tyr Tyr Met Leu Gly Pro Ala Lys Glu Thr Asn Ile
 125 130 135
 Ala Val Phe Trp Cys Leu Leu Thr Val Thr Phe Ser Ile Lys Met
 140 145 150
 Phe Leu Thr Val Thr Arg Leu Tyr Phe Ser Ala Glu Glu Gly Gly
 155 160 165
 Glu Arg Ser Val Cys Leu Thr Phe Ala Phe Leu Phe Leu Leu Leu
 170 175 180
 Ala Met Leu Val Gln Val Val Arg Glu Glu Thr Leu Glu Leu Gly
 185 190 195
 Leu Glu Pro Gly Leu Ala Ser Met Thr Gln Asn Leu Glu Pro Leu
 200 205 210
 Leu Lys Lys Gln Gly Trp Asp Trp Ala Leu Pro Val Ala Lys Leu
 215 220 225
 Ala Ile Arg Val Gly Leu Ala Val Val Gly Ser Val Leu Gly Ala
 230 235 240
 Phe Leu Thr Phe Pro Gly Leu Arg Leu Ala Gln Thr His Arg Asp
 245 250 255
 Ala Leu Thr Met Ser Glu Asp Arg Pro Met Leu Gln Phe Leu Leu
 260 265 270
 His Thr Ser Phe Leu Ser Pro Leu Phe Ile Leu Trp Leu Trp Thr
 275 280 285
 Lys Pro Ile Ala Arg Asp Phe Leu His Gln Pro Pro Phe Gly Glu

	290		295		300
Thr Arg Phe Ser	Leu Leu Ser Asp Ser	Ala Phe Asp Ser Gly	Arg		
	305	310		315	
Leu Trp Leu Leu	Val Val Leu Cys Leu	Leu Arg Leu Ala Val	Thr		
	320	325		330	
Arg Pro His Leu	Gln Ala Tyr Leu Cys	Leu Ala Lys Ala Arg	Val		
	335	340		345	
Glu Gln Leu Arg	Arg Glu Ala Gly Arg	Ile Glu Ala Arg Glu	Ile		
	350	355		360	
Gln Gln Arg Val	Val Arg Val Tyr Cys	Tyr Val Thr Val Val	Ser		
	365	370		375	
Leu Gln Tyr Leu	Thr Pro Leu Ile Leu	Thr Leu Asn Cys Thr	Leu		
	380	385		390	
Leu Leu Lys Thr	Leu Gly Gly Tyr Ser	Trp Gly Leu Gly Pro	Ala		
	395	400		405	
Pro Leu Leu Ser	Pro Asp Pro Ser Ser	Ala Ser Ala Ala Pro	Ile		
	410	415		420	
Gly Ser Gly Glu	Asp Glu Val Gln Gln	Thr Ala Ala Arg Ile	Ala		
	425	430		435	
Gly Ala Leu Gly	Gly Leu Leu Thr Pro	Leu Phe Leu Arg Gly	Val		
	440	445		450	
Leu Ala Tyr Leu	Ile Trp Trp Thr Ala	Ala Cys Gln Leu Leu	Ala		
	455	460		465	
Ser Leu Phe Gly	Leu Tyr Phe His Gln	His Leu Ala Gly Ser			
	470	475			

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
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 ggaggagcct cgggccctgg cggggaagcc gagggccaga ggcaggaaag 200
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actcggggcg cgtgtacctc ttcacagagg cctactacta catgctggga 400
 ccagccaagg agactaacat tgctgtgttc tgggtgctgc tcacagtgc 450
 cttctccatc aagatgttcc tgacagtgac acggctgtac ttcagcgccg 500
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 ctgctggcca tgctggtgca agcg 574

<210> 218

<211> 2571

<212> DNA

<213> Homo sapiens

<400> 218

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 cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgccttggtc 250
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 cagaactctg taaagggtgc tccactacg gctgaccaa agataggaaag 350
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 ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500
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 aaatattttt cagaagttaa a 2571

<210> 219
 <211> 632
 <212> PRT
 <213> Homo sapiens

<400> 219
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Asn Tyr Ile Asp	Asn Val Gly Asn Leu	His Phe Leu Tyr Ser	Glu 30
	20	25	
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys 45
	35	40	
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr 60
	50	55	
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Thr Ile Ser	75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val	Ser 90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly 105
	95	100	
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile 120
	110	115	
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu 135
	125	130	
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln 150
	140	145	
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro 165
	155	160	
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys 180
	170	175	
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val 195
	185	190	
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile 210
	200	205	
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly 225
	215	220	
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro 240
	230	235	
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu 255
	245	250	
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn 270
	260	265	
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His 285
	275	280	
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys 300
	290	295	
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val 315
	305	310	
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

[illegible]

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
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 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcacagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcggttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgtttccc aacaaataca cctgggtcaa gtacaacctt 450
 ctggagtcct tgatcaaaga cgtggattgg ttcctgcttg ggtaacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgcctggtct ggaggctgtg caaaggctgg gctcctgggg 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
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 tcaaattaaa ttctttccca atgcccacac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
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 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile Pro Pro Leu Asn Asn Leu Gln Trp Tyr Ile Tyr Glu Lys Gln
95 100 105

Ala Leu Asp Asn Met Phe Ser Asn Lys Tyr Thr Trp Val Lys Tyr
110 115 120

Asn Pro Leu Glu Ser Leu Ile Lys Asp Val Asp Trp Phe Leu Leu
125 130 135

Gly Ser Pro Ile Glu Lys Leu Cys Lys His Ile Pro Leu Tyr Lys
140 145 150

Gly Glu Val Val Glu Asn Thr His Asn Val Gly Ala Gly Gly Cys
155 160 165

Ala Lys Ala Gly Leu Leu Gly Ile Leu Gly Ile Ser Ile Cys Ala
170 175 180

Asp Ile His Val

<210> 222
<211> 992
<212> DNA
<213> Homo sapiens

<400> 222
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ccattgccta caaagtctcg gaagttttcc ccaaaggccg ctgggtgctc 200
ataacctgct gtgcacccca gccaccaccg cccatcacct attccctctg 250
tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300
cggcctcctt caacctcaac gtcacactca agtcagctc agacctgctc 350
acctacttct gccgggcgtc ctccacctca ggtgcccatg tggacagtgc 400
caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
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gaaggatggg caggtccacc tgcagcagag accatgccac aggcagcctg 600
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gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgcccc 700
aggtggtgac cagaagatgg aggactggca gggccccctg gagagcccca 750
tccttgccct gccgtctac aggagcaccg gccgtctgag tgaagaggag 800
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<210> 224
 <211> 1297
 <212> DNA
 <213> Homo sapiens

<400> 224
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 ggtggtgtgc ggttcaagcc cagggtgatg aaaagacttt tcttactat 200
 gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
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 cccaaggaac cctcacccct gcaggcaagg atgtcttgtg agcagaaagc 400
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<210> 225
 <211> 246
 <212> PRT
 <213> Homo sapiens

<400> 225

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Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
 20          25          30

His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
 35          40          45

Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
 50          55          60

Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
 65          70          75

Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
 80          85          90

Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
 95          100         105

Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110          115         120

Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125          130         135

Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140          145         150

Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155          160         165

Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170          175         180

Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185          190         195

Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200          205         210

Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215          220         225

Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230          235         240

Phe Ile Leu Pro Gly Ile
245

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<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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caagtatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

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ggttttaatt ttggtggtag cccctaccca attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttgat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
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 accaatgaga gaaaaaaatg catttctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
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 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
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 gtttgcctgt gcagtaacca gtccagcaag gtggtgtgca cgcgcggggg 250
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	185		190		195
Phe Asn Leu Lys Tyr	200	Leu Asn Leu Gly Met	205	Cys Asn Ile Lys Asp	210
Met Pro Asn Leu Thr	215	Pro Leu Val Gly Leu	220	Glu Glu Leu Glu Met	225
Ser Gly Asn His Phe	230	Pro Glu Ile Arg Pro	235	Gly Ser Phe His Gly	240
Leu Ser Ser Leu Lys	245	Lys Leu Trp Val Met	250	Asn Ser Gln Val Ser	255
Leu Ile Glu Arg Asn	260	Ala Phe Asp Gly Leu	265	Ala Ser Leu Val Glu	270
Leu Asn Leu Ala His	275	Asn Asn Leu Ser Ser	280	Leu Pro His Asp Leu	285
Phe Thr Pro Leu Arg	290	Tyr Leu Val Glu Leu	295	His Leu His His Asn	300
Pro Trp Asn Cys Asp	305	Cys Asp Ile Leu Trp	310	Leu Ala Trp Trp Leu	315
Arg Glu Tyr Ile Pro	320	Thr Asn Ser Thr Cys	325	Cys Gly Arg Cys His	330
Ala Pro Met His Met	335	Arg Gly Arg Tyr Leu	340	Val Glu Val Asp Gln	345
Ala Ser Phe Gln Cys	350	Ser Ala Pro Phe Ile	355	Met Asp Ala Pro Arg	360
Asp Leu Asn Ile Ser	365	Glu Gly Arg Met Ala	370	Glu Leu Lys Cys Arg	375
Thr Pro Pro Met Ser	380	Ser Val Lys Trp Leu	385	Leu Pro Asn Gly Thr	390
Val Leu Ser His Ala	395	Ser Arg His Pro Arg	400	Ile Ser Val Leu Asn	405
Asp Gly Thr Leu Asn	410	Phe Ser His Val Leu	415	Leu Ser Asp Thr Gly	420
Val Tyr Thr Cys Met	425	Val Thr Asn Val Ala	430	Gly Asn Ser Asn Ala	435
Ser Ala Tyr Leu Asn	440	Val Ser Thr Ala Glu	445	Leu Asn Thr Ser Asn	450
Tyr Ser Phe Phe Thr	455	Thr Val Thr Val Glu	460	Thr Thr Glu Ile Ser	465
Pro Glu Asp Thr Thr	470	Arg Lys Tyr Lys Pro	475	Val Pro Thr Thr Ser	480
Thr Gly Tyr Gln Pro	485	Ala Tyr Thr Thr Ser	490	Thr Thr Val Leu Ile	495
Gln Thr Thr Arg Val		Pro Lys Gln Val Ala		Val Pro Ala Thr Asp	

Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr
515		520	525
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala
530		535	540
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln
545		550	555
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln
560		565	570
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala
575		580	585
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr
590		595	600
Ile His Asp His	Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His	Gly
605		610	615
Ala His Trp Thr	Glu Asn Ser Leu Gly	Asn Ser Leu His Pro	Thr
620		625	630
Val Thr Thr Ile	Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr	Lys
635		640	645
Asp Lys Val Gln	Glu Thr Gln Ile		
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<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150

tccggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200

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tgtgactect gcctgatcca cccaggttgt accatctttg aaaactgcaa 300

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aggggttcta ctgtgcagag tgcgcagcag gctggtaacgg aggagactgc 400

atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450

aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaacctg 500

ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550

atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600

ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataaggatc ctcaactccac gtctctcttcc actccgatgg ctccaagaat 700
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<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
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Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	170	180
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	185	195
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	200	210
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	215	225
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	230	240
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	245	255
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	260	270
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	275	285
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	290	300
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	305	315
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	320	330
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	335	345
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	350	360
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	365	375
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	380	390
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	395	405
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	410	420
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	425	435
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	440	450
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	455	465
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	470	480

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	485	490	495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttctgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

COFFEE

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caaattccga ttactgttgc tgttgacttt gtgcctgaca gtgggtgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tcctaaagca 250
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aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
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gatctcaact tggaagaggt acaggcagaa aatcccaaa ggtccagagg 450
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 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
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 gtgaaaaagc aaaa 1964

<210> 236
 <211> 344
 <212> PRT
 <213> Homo sapiens

<220>
 <221> Signal peptide
 <222> 1-27
 <223> Signal peptide

<220>
 <221> N-glycosylation sites
 <222> 4-7, 220-223, 335-338
 <223> N-glycosylation sites

<220>
 <221> Xylose isomerase proteins
 <222> 191-201
 <223> Xylose isomerase proteins

<400> 236
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu
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Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	20	25	30
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	35	40	45
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	50	55	60
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	65	70	75
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	80	85	90
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	95	100	105
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	110	115	120
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	125	130	135
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	140	145	150
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	155	160	165
Lys	Ly's	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	170	175	180
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	185	190	195
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	200	205	210
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	215	220	225
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	230	235	240
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	245	250	255
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	260	265	270
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	275	280	285
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	290	295	300
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	305	310	315
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	320	325	330

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacg cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
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<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
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ccgcacccctc tggettgcct gcctcctgcc ctgggcccgg gcagggggtg 200
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<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
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 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190 195

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 242
 catttcctta cccctggaccc agctcc 26

 <210> 243
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccg agcaacttc tcaagaccga cttgtttctc tacag 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctggggccgt tgcctcctgc tcctcctcct cctgcgccag 100
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccacttcc coactcgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg ccccgctccc ctcccttctc tatttattcc tgctgcccc 350
gaacataggt ctgtgaataa aatggctggt tcttttggtt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggctgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tcacccatgt tctgttget gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcgtt ttcacatag tgccagccat ttttgagtc tcttttgga 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcaggagag caaggagaag aaccaccagc ttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggcctctga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccggaaag gaattggagac 450
cattatggat gatgaggga caaagagatt ctccagcaga gaactggagt 500
cctggaaact gctgagcaga accaattata acttcagta catcagcctt 550
cggtcacagg tctgtgggg gtaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggtttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtgga tacttgcaa atgggaggtt taaggaatto 700
atgagtaaac atgttcactt aatgtgttac cggatctgag tgcagagcgt 750
gacagccatc atcacctacc atgacaggga aaacagacca agaagtggg 800
gcattctgtg gcccaatcat acctcaccga tcgatgtgat catcttggcc 850
agcagtggtc attatgccat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatgc cacctgggtg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttcccag aaggaacctg 1050
catcaataat acatcggtga tgatgttcaa aaaggaagt tttgaaattg 1100
gagccacagt ttacctgtt gctatcaagt atgacctca atttgcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctcgcaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagaggg agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcca ggcagggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
 acagcaagat gatcgtgggg aaccacaagg acaggagccg ctccctgagcc 1450
 tgccctccagc tggctggggc caccgtgcgg ggtgccaacg ggctcagagc 1500
 tggagtgtgc gccgccgcc ccaactgctgt gtccctttcca gactccaggg 1550
 ctccccgggc tgctctggat ccaggaactc cggctttcgc cgagcccgag 1600
 cgggatccct gtgcaccccg cgagccctac ccttggtggt ctaaacggat 1650
 gctgctgggt gttgcgacc aggaacgagat gccttgtttc ttttacaata 1700
 agtcgttgga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
 gcgggctgag tggttgggga gatgtggcca tggctttgtg ctagagatgg 1800
 cggtaacaaga gtctgttatg caagcccggtg tgccagggat gtgctggggg 1850
 cggccaccgg ctctccagga aaggcacagc tgaggcactg tggctggcct 1900
 cggccctcaac atcgccccc gccttgaggc tctgcagaca tgataggaag 1950
 gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
 tgctgctgct gatgggggta ctaaaggag ggaagaggc caggtggggc 2050
 gctgactggg ccatggggag aacgtgtggt cgtactccag gctaacctg 2100
 aactcccat gtgatgcgcg ctttgttgaa tgtgtgtctc ggtttcccca 2150
 tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
 gttgtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
 tgtttcaagt acaggccac aaaacggggc acggcaggcc tgagctcaga 2300
 gctgctgcac tgggctttgg atttgttctt gtgagtaaat aaaactggct 2350
 ggtgaatga 2359

<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
 Met Phe Leu Leu Pro Phe Asp Ser Leu Ile Val Asn Leu Leu
 1 5 10 15
 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
 20 25 30
 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu	
				80					85					90	
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp	
				95					100					105	
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg	
				110					115					120	
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe	
				125					130					135	
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn	
				140					145					150	
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly	
				155					160					165	
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile	
				170					175					180	
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr	
				185					190					195	
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser	
				200					205					210	
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu	
				215					220					225	
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn	
				230					235					240	
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile	
				245					250					255	
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His	
				260					265					270	
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys	
				275					280					285	
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu	
				290					295					300	
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu	
				305					310					315	
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser	
				320					325					330	
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val	
				335					340					345	
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe	
				350					355					360	
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met	
				365					370					375	
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Glu	
				380					385					390	

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
				410					415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
				425					430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
				440					445					450
Lys	Asp	Arg	Ser	Arg	Ser									
				455										

<210> 249
 <211> 1103
 <212> DNA
 <213> Homo sapiens

<400> 249
 gccccctcgaa accaggactc cagcacctct ggtcccgccc tcaccoggac 50
 ccctggccct cactctctct ccagggatgg cgctggcggc ttgatgatc 100
 gccctcggca gcctcggcct ccacacctgg caggcccagg ctgttccac 150
 catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgttg 200
 gttgtgcaga ggagatggag gagaaggcag ccccccgtct aaaggaggaa 250
 atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300
 ctgggaggac aagcgtogag ggcttaacct gccccctggc tcaaaagccc 350
 agaatggaat agccattatg gtctaacca actcatcgaa cactttgtac 400
 tgggagttga atcaggccgt gcggacgggc ggaggtccc gggagctcta 450
 catgaggcac tttcccttca aggccctgca tttctacctg atccggggccc 500
 tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
 gtgttcogag gtgtgggcag ccttcgcttt gaacccaaga ggctggggga 600
 ctctgtccgc ttgggccaagt ttgcctccag ctccctggat aaggcagttg 650
 cccacagatt tggggagaag agggggggct gtgtgtctgc gccaggggtg 700
 cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
 tetgtctctg gccccctggag agttccagct ctcaggggtt gggccctgaa 800
 agtccaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
 acgaagaggc acotccagca gcottgagaa gcaagaacat ggttccggac 900
 ccagccctag cagccttctc cccaaccagg atgttgccct ggggaggcca 950
 cagcagggct gagggaactc tgctatgtga tggggacttc ctgggacaag 1000
 caaggaaagt actgaggcag ccaacttgatt gaacggtgtt gcaatgtgga 1050

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaattccatc cggcagattg 50

<210> 252
<211> 1076
<212> DNA
<213> Homo sapiens

<400> 252
gtggcttcat ttcagtggct gacttcaga gagcaatatg gctgggtccc 50
caacatgcct caccctcatc tatatccttt gccagctcac agggtcagca 100
gcctctggac cgtgaaaga gctggtcggt tccgttggtg gggccgtgac 150
tttcccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac cctcttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatag ggagagagta gacttccag atggaggcta 300
ctccctgaag ctccagcaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccacca ggagtaactg 400
ctgcatgtct acgagcacct gtcaaacct aaagtcacca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattgaac 500
atggggaaga ggatgtgatt tatacctgga aggcctctgg gcaagcagcc 550
aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct gcgttgccag gaacctgtc agcagaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtc tgctgatgac 700
ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgct 750
cagtctcttt gtactggggc tatctctttg gttctgaaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg togggaaact 850
cctaacatat gcccccattc tggagagaa acagagtaac acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000
atgccagaca caccaaggct atttgctat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253
<211> 335
<212> PRT
<213> Homo sapiens

<400> 253
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1					5					10					15			
Gln	Leu	Thr	Gly	Ser	20	Ala	Ala	Ser	Gly	Pro	25	Val	Lys	Glu	Leu	Val	30	
Gly	Ser	Val	Gly	Gly	35	Ala	Val	Thr	Phe	Pro	40	Leu	Lys	Ser	Lys	Val	45	
Lys	Gln	Val	Asp	Ser	50	Ile	Val	Trp	Thr	Phe	55	Asn	Thr	Thr	Pro	Leu	60	
Val	Thr	Ile	Gln	Pro	65	Glu	Gly	Gly	Thr	Ile	70	Ile	Val	Thr	Gln	Asn	75	
Arg	Asn	Arg	Glu	Arg	80	Val	Asp	Phe	Pro	Asp	85	Gly	Gly	Tyr	Ser	Leu	90	
Lys	Leu	Ser	Lys	Leu	95	Lys	Lys	Asn	Asp	Ser	100	Gly	Ile	Tyr	Tyr	Val	105	
Gly	Ile	Tyr	Ser	Ser	110	Ser	Ser	Leu	Gln	Gln	Pro	115	Ser	Thr	Gln	Glu	Tyr	120
Val	Leu	His	Val	Tyr	125	Glu	His	Leu	Ser	Lys	130	Pro	Lys	Val	Thr	Met	135	
Gly	Leu	Gln	Ser	Asn	140	Lys	Asn	Gly	Thr	Cys	145	Val	Thr	Asn	Leu	Thr	150	
Cys	Cys	Met	Glu	His	155	Gly	Glu	Glu	Asp	Val	160	Ile	Tyr	Thr	Trp	Lys	165	
Ala	Leu	Gly	Gln	Ala	170	Ala	Asn	Glu	Ser	His	175	Asn	Gly	Ser	Ile	Leu	180	
Pro	Ile	Ser	Trp	Arg	185	Trp	Gly	Glu	Ser	Asp	190	Met	Thr	Phe	Ile	Cys	195	
Val	Ala	Arg	Asn	Pro	200	Val	Ser	Arg	Asn	Phe	205	Ser	Ser	Pro	Ile	Leu	210	
Ala	Arg	Lys	Leu	Cys	215	Glu	Gly	Ala	Ala	Asp	220	Asp	Pro	Asp	Ser	Ser	225	
Met	Val	Leu	Leu	Cys	230	Leu	Leu	Leu	Val	Pro	235	Leu	Leu	Leu	Ser	Leu	240	
Phe	Val	Leu	Gly	Leu	245	Phe	Leu	Trp	Phe	Leu	250	Lys	Arg	Glu	Arg	Gln	255	
Glu	Glu	Tyr	Ile	Glu	260	Glu	Lys	Lys	Arg	Val	265	Asp	Ile	Cys	Arg	Glu	270	
Thr	Pro	Asn	Ile	Cys	275	Pro	His	Ser	Gly	Glu	280	Asn	Thr	Glu	Tyr	Asp	285	
Thr	Ile	Pro	His	Thr	290	Asn	Arg	Thr	Ile	Leu	295	Lys	Glu	Asp	Pro	Ala	300	
Asn	Thr	Val	Tyr	Ser	305	Thr	Val	Glu	Ile	Pro	310	Lys	Lys	Met	Glu	Asn	315	
Pro	His	Ser	Leu	Leu		Thr	Met	Pro	Asp	Thr		Pro	Arg	Leu	Phe	Ala		

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
ctggttcccc aacatgcctc accctcatct atatacctttg gcagctcaca 50
gggtcagcag cctotggacc cgtgaaagag ctggtcgggt ccgttggttg 100
ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
totggacott caacacaacc cctcttgtea ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350
gagtaactgt tgcattgcta cgagcacctg tcaagccta aagtcacat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggcctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca totcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgt 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttggtgcc 700
cctcctgctc agtctctttg tactggggct atttctttgg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg ccccatctct ggagagaaca cagagtacga 850
cacaaacctc cacactaata gaacaatcct aaaggaagat ccagcaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgtcacga tgccagacac accaaggcta tttgcctatg agaattgtat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
gaaagacgtg gtctgtgacag acagacaatc ctattcccta ccaaaatgaa 50

gatgctgctg ctgctgtgtt tgggactgac cctagtctgt gtccatgcag 100
 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggccctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgac ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtg ccccgaatta 300
 tctatggttg'ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
 tgcacaacta tgtgaggagc atggaatcct tagagaaaa atcattgacc 550
 tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
 gcctccagtg ttgagtggac acttctcacc aggactccac catcatcct 650
 tctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacacccct 800
 gacaattttt catgaaatta ttctctctcc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 256
 Met Lys Met Leu Leu Leu Cys Leu Gly Leu Thr Leu Val Cys
 1 5 10 15
 Val His Ala Glu Glu Ala Ser Ser Thr Gly Arg Asn Phe Asn Val
 20 25 30
 Glu Lys Ile Asn Gly Glu Trp His Thr Ile Leu Ala Ser Asp
 35 40 45
 Lys Arg Glu Lys Ile Glu Glu His Gly Asn Phe Arg Leu Phe Leu
 50 55 60
 Glu Gln Ile His Val Leu Glu Asn Ser Leu Val Leu Lys Val Asp
 65 70 75
 Thr Val Arg Asp Glu Glu Cys Ser Glu Leu Ser Met Val Ala Asp
 80 85 90
 Lys Thr Glu Lys Ala Gly Glu Tyr Ser Val Thr Tyr Asp Gly Phe
 95 100 105
 Asn Thr Phe Thr Ile Pro Lys Thr Asp Tyr Asp Asn Phe Leu Met
 110 115 120

Ala His Leu Ile Asn Glu Lys Asp Gly Glu Thr Phe Gln Leu Met
125 130 135
Gly Leu Tyr Gly Arg Glu Pro Asp Leu Ser Ser Asp Ile Lys Glu
140 145 150
Arg Phe Ala Gln Leu Cys Glu Glu His Gly Ile Leu Arg Glu Asn
155 160 165
Ile Ile Asp Leu Ser Asn Ala Asn Arg Cys Leu Gln Ala Arg Glu
170 175 180

<210> 257

<211> 766

<212> DNA

<213> Homo sapiens

<400> 257

ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200
agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
aaagagcgctg ctgcaacaac agaactggaa tgtttctttc atcatTTTTc 300
agtgtgatca cagtcattgg tgctctgtat tgcagtctga tatccatcca 350
ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
ttcaacttgc agtggTTTTt caatgaactc tgtgcacctc ctactgggtt 500
caataaaacc accagtaacg acaccatggc gaggggctgg agagcatcta 550
gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650
cagtcagata gtcacgggtt tccttgctg tctgtgtgga gtcctcaagc 700
gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
gtttgaaaaa aaaaaa 766

<210> 258

<211> 229

<212> PRT

<213> Homo sapiens

<400> 258

Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
1 5 10 15
Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
20 25 30
Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

35	40	45
Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu		
50	55	60
Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg		
65	70	75
Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe		
80	85	90
Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser		
95	100	105
Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser		
110	115	120
Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp		
125	130	135
Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser		
140	145	150
Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr		
155	160	165
Met Ala Ser Gly Trp Arg Ala Ser Ser Phe His Phe Asp Ser Glu		
170	175	180
Glu Asn Lys His Arg Leu Ile His Phe Ser Val Phe Leu Gly Leu		
185	190	195
Leu Leu Val Gly Ile Leu Glu Val Leu Phe Gly Leu Ser Gln Ile		
200	205	210
Val Ile Gly Phe Leu Gly Cys Leu Cys Gly Val Ser Lys Arg Arg		
215	220	225
Ser Gln Ile Val		

<210> 259
 <211> 434
 <212> DNA
 <213> Homo sapiens

<400> 259
 gtcgaaatcca aatcactcat tgtgaaagct gagctcacag ccgaataagc 50
 caccatgagg ctgtcagtggt gtctcctgat ggctcgtg gccctttgct 100
 gctaccaggc ccattgctctt gtctgccag ctgttgcttc tgagatcaca 150
 gtcttcttat tcttaagtga cgtgoggta aacctccaag ttgccaaact 200
 taatccaact ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
 ccgatcagat atcttttaag aaacgactct cattgaaaaa gtcctgggtg 300
 aaatagttaa aaaatgtggt gtgtgacatg taaaaatgct caacctgggt 350
 tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaagggt 400

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccggttctc tgcgctgccca gtcagggtga gccctcgccca aggtgacctc 50

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ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgac cctggccctt ctctacttg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccaactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taaacttggc ccccagcacc tctctccctg ggaggcctta tctcaagga 550

aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc cctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac ctgtcgaggc acccagaata ccaggagcgc 1100
 tgccgcagcg aggtgcaaga gcttctgaag gaccgcgacg ctaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcattctccg atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atccccaag gcattacctg 1300
 cctcatogat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctccgca gggcccagga actgcacggg 1450
 gcaggcgctc gccatggcgg agatgaaagt ggtcctggcg ttgatctgc 1500
 tgcaactccg gttctcgca gaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600
 tgtagccttg cagtgaactt ctgacctatc cacctgtttt tttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264
 <211> 524
 <212> PRT
 <213> Homo sapiens

<400> 264
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala
 1 5 10 15
 Met Ser Pro Trp Leu Leu Leu Leu Val Val Gly Ser Trp Leu
 20 25 30
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys
 35 40 45
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe
 50 55 60
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys
 65 70 75
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val
 80 85 90
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp
 95 100 105
 Thr Ile Arg Ser Ile Thr Asn Ala Ser Ala Ala Ile Ala Pro Lys
 110 115 120
 Asp Asn Leu Phe Ile Arg Phe Leu Lys Pro Trp Leu Gly Glu Gly
 125 130 135

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
 455 460 465
 Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
 470 475 480
 Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
 485 490 495
 Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
 500 505 510
 Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
 515 520

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgtttgct ttccacagga ttcttaaatc ctctcttacc 100
 ttctcctctc cttgactcca gggaaatata ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
 cagatatgac cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
 agcagactca agtaccaca tttttaacc aagaggaaat ttgagaaagt 300
 ttccaggatt ctctggacaa gatcctaaca ttttactgag tcattctttg 350
 gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaatactgt gtctgaagt aaataagcat ctgttagtca gtcagaaac 450
 acccatctta gaatatgaaa aataacacaa tgcttgatt gaaacacgtg 500
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaataa 550
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 266
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
 1 5 10 15
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
 20 25 30
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
 35 40 45
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
 50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70 75
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttcccaag gaatgtacat cagccccaag gaagctaggc 50
cacctctggg atgggggttc tggtttaaaa caaacgccag tcatacctata 100
taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
acctgtctgc aaccagctg aggccatgcc ctccccagg accgtctgca 200
gcctctctgt cctcgcatg ctctggctgg acttggccat ggcaggctcc 250
agcttctcta gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaaagtgc agcccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
ttcaacgccc cctttgatgt tggaatcaag ctgtcagggg ttcatgacca 450
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cgccccaaag ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

cggccacagc tggcatgctc tgccctgatcg ccactcctgct gtatgtcctc 50
gtccagttacc tcgtgaaccc cgggggtgctc cgcacggacc ccagatgtca 100
agaatatgaa cacgtggctg ctgttcctcc cctgttccccc ggtgcagggt'150
cagaccctga tagtcgtgat catcgggatg ctctgtctcc tgctggactt 200
tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250
gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagccccc 350
cacgctctgg gccagagtct ttgtcccccg tgtgcgatg tgttcagggt 400
cagcctctcc cagaagttag atcatggaca aaaaggcaca atcacaggaa 450
gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550
tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
aaataaggac aggtgggactt ccaaaaacac aagtagaagt tctaacaatg 650
aaatatatta caggcaggct acccactaac caaacaactg aagcgagagc 700
tgtgtgtctg cttgtgtctc cagtgggcac agcggtaggc ggtcagtcac 750
gttgctgaac gacggagggt aaactcccca gccccaagaa aacctgtgtt 800
ggaagtaaca acaacctccc tgctcctggc accagccgtt ttggtcatgg 850
tgggccaagt gcaaagcgtc ttccattctc tgggcagttg tggccccgag 900
gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950
aggccagccc ccaagaatgc cctgctcctg acagcttgcc caaccctgg 1000
tcagggcaga gggagttggg tgggtcaggc tctgggtcca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100
 acacacccca ccaagagcct ccttgttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctgggggatgt tttaaaacac acacotctaa 1200
 cgcatactct acagtcaactg ttgtottgcc tgagggttga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
 ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
 accatggcca agatggagct ctccaaggcc ttctctggcc agcggacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaag gtctggcagc caagtgcctt gacatgccag tgcctctgga 250

tggagataacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga cgggttctcc ttccggagct tccggagtgg catgtggcta 350
 tccctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccctaactc tccgatttgg agggaaagcgg 500
 ttgatggaga aggcctccct cccctcccct cccctggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcatcagct tctcctctgt actaacagac ttgctactca ctgggaaccc 650
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 cagggtctcct ggggatggtg gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctgggcc ttctacatgg cctggctctc cttcacctgc tgcattggcg 850
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 gagggtgctg acttctactc cgagctcggg aacaagggat ttcaaagagg 1100
 ggccagccag gagctgaaaag aagcagttag gtcactctga gaggaagagc 1150
 agtgtttaga gttaagcggg ttgggggagt aggccttgcg cctaccttac 1200
 acgtctgtcg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atggttttta gaggctacga ataaggctat gaataagggt tatctttaag 1300
 tctaaggga ttccctgggtg ccactgctct cttttcctct acagctccat 1350
 cttgtttcac ccaccccaca tctcacatc ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272

<211> 285

<212> PRT

<213> Homo sapiens

<400> 272

Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr
 1 5 10 15

Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30

Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

	35		40		45
Pro Lys Pro Leu	Cys 50	Glu Lys Gly Leu	Ala 55	Lys Cys Phe	Asp 60
Met Pro Val Ser	Leu 65	Asp Gly Asp Thr	Asn 70	Thr Ser Thr Gln	Glu 75
Val Val Gln Tyr	Asn 80	Trp Glu Thr Gly	Asp 85	Asp Arg Phe Ser	Phe 90
Arg Ser Phe Arg	Ser 95	Gly Met Trp Leu	Ser 100	Cys Glu Glu Thr	Val 105
Glu Glu Pro Gly	Glu 110	Arg Cys Arg Ser	Phe 115	Ile Glu Leu Thr	Pro 120
Pro Ala Lys Arg	Gly 125	Glu Lys Gly Leu	Leu 130	Glu Phe Ala Thr	Leu 135
Gln Gly Pro Cys	His 140	Pro Thr Leu Arg	Phe 145	Gly Gly Lys Arg	Leu 150
Met Glu Lys Ala	Ser 155	Leu Pro Ser Pro	Pro 160	Leu Gly Leu Cys	Gly 165
Lys Asn Pro Met	Val 170	Ile Pro Gly Asn	Ala 175	Asp His Leu His	Arg 180
Thr Ser Ile His	Gln 185	Leu Pro Pro Ala	Thr 190	Asn Arg Leu Ala	Thr 195
His Trp Glu Pro	Cys 200	Leu Trp Ala Gln	Thr 205	Glu Arg Leu Cys	Cys 210
Cys Phe Leu Cys	Pro 215	Val Arg Ser Pro	Gly 220	Asp Gly Gly Pro	His 225
Asp Val Phe Thr	Ser 230	Leu Pro Ser Asp	Cys 235	Gln Leu Gly Ser	Arg 240
Arg Leu Glu Thr	Thr 245	Cys Leu Glu Leu	Trp 250	Leu Gly Leu Leu	His 255
Gly Leu Ala Leu	Leu 260	His Leu Leu His	Gly 265	Val Gly Cys His	His 270
Leu Gln His Val	His 275	Gln Asp Gly Ala	Gly 280	Val Gln Val Gln	Ala 285

<210> 273

<211> 1158

<212> DNA

<213> Homo sapiens

<400> 273

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 cttggtctcc tgtctttatg tctttctcct cttcctattc tgtcatctcc 100
 ctcaacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 cctctggtagc cttcagagca aacaggacaa cctatgttat ggaatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaattctg 350
 cctgccctat tctctctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccagggaga aatggaggag cttttagacc 500
 acctccctgt cagccagtat taacatgtcc ccttccccct gccccgcgt 550
 agattcagga cattgcccc tgtgtgccac caaaccagga ctttccccct 600
 ggcttggcat ccttggtct ctctggtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcattcttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgctga ataataaagt gggaagggga agcagaggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctggttttta tcggaaagat 850
 catctgctct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aatgcaggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcaact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccaggt gtattacctg 1050
 ctggaaccaa ggaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgccaatg ccacaaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274
 <211> 86
 <212> PRT
 <213> Homo sapiens

<400> 274
 Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu
 1 5 10 15
 Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln
 20 25 30
 Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn
 35 40 45
 Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
 50 55 60
 Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg
 65 70 75
 Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
 gtagcgcgctc ttgggtctcc cggctgccgc tgctgccgc gccgcctcgg 50
 gtctgtggagc caggagcgac gtcaccgcca tggcaggcat caaagctttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaataactg gccctctttt gttctatttt 200
 tttacatcct ttcaoctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggact ccctattgta tttgccagag 350
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<210> 276
<211> 131
<212> PRT
<213> Homo sapiens

<400> 276
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20 25 30
Asn Lys Tyr Trp Pro Leu Phe Val Leu Phe Phe Tyr Ile Leu Ser

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<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

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				20					25					30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	
				35					40					45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	
				50					55					60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	
				65					70					75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	
				80					85					90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	
				95					100					105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	
				110					115					120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	
				125					130					135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	
				140					145					150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	
				155					160					165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	
				170					175					180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	
				185					190					195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	
				200					205					210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	
				215					220					225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	
				230					235					240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	
				245					250					255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	
				260					265					270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	
				275					280					285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
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Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
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<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

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155 160 165
Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180
Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195
Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210
Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225
Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
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tgtgttttgc acttacctg tgttctgcct ttggttgcca taacaaggga 150
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
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<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr Asn Ser Arg Ile Gln Pro		
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp His Ile Leu Gln Asn Lys		
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His Gly Tyr Asp Asn Ala Leu		
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala His Gly Pro Ala Phe Arg		
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn Ser Thr Asp Leu Tyr Pro		
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr Ala Met Pro His Asn Gly		
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu Asn Ser Ala Met Pro Arg		
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile Leu Leu Pro Gly Ser Val		
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly Ser Tyr Pro Tyr Phe Ile		
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val Ile Val Phe Phe Val Ile		
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln Ile Pro Ala Leu Gln Asp		
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu Leu Gln Ala		
470	475	

<210> 286
 <211> 1337
 <212> DNA
 <213> Homo sapiens

<400> 286
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 tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
 aacaggggaca tggccacctg ggacgaaaaa gcagtcaccc gcaggggcaa 250
 ggtggctccc gctgagagga tgagcaagtt cttaaggcac ttacgggtcg 300
 tgggagacga ctaccatgcc tggaaacatca actacaagaa atgggagaat 350
 gaagaggagg aggaggagga ggagcagcca caccacacac cagtctcagg 400
 cgagggaagg agagctgcag cccctgacgt tgccccctgc cctggccccg 450
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 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250
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 taataaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1337

<210> 287
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 287
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 Val Gly Asp Asp Tyr His Ala Trp Asn Ile Asn Tyr Lys Lys Trp
 35 40 45
 Glu Asn Glu Glu Glu Glu Glu Glu Glu Gln Pro Pro Pro Thr
 50 55 60
 Pro Val Ser Gly Glu Glu Gly Arg Ala Ala Pro Asp Val Ala
 65 70 75
 Pro Ala Pro Gly Pro Ala Pro Arg Ala Pro Leu Asp Phe Arg Gly
 80 85 90
 Met Leu Arg Lys Leu Phe Ser Ser His Arg Phe Gln Val Ile Ile
 95 100 105
 Ile Cys Leu Val Val Leu Asp Ala Leu Leu Val Leu Ala Glu Leu
 110 115 120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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cccagaccga gttccagtag tttgagtcga aggggctccc tgccgagctg 150

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ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250

atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300

aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350

cattgacgcg caggagatca tgcagtcctc gcgggacttg ggagtcaaga 400

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<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
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 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	95	100
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	110	115
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	125	130
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	140	145
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	155	160
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	170	175
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	185	190
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	200	205
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	215	220
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	230	235
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	245	250
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	260	265
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	275	280
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	290	295
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	305	310
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	320	325
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	335	340
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	350	355
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	365	370
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	380	385
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	395	400

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465
Val Gln Ser Arg														

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
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 attcaggga gacactccat cacagtcact actgtgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
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 aaaaaaaaa 1658

<210> 291
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 291
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 Ile Ser Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala
 35 40 45
 Gly Asn Ile Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro
 50 55 60
 Asp Ile Lys Leu Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly
 65 70 75
 Val Leu Gly Leu Val His Glu Phe Lys Glu Gly Lys Asp Glu Leu
 80 85 90
 Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr Ala Val Phe Ala
 95 100 105
 Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu Lys Asn Val
 110 115 120
 Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile Thr Ser
 125 130 135
 Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala Phe
 140 145 150
 Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr

155	160	165
Leu Arg Cys Glu Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val Val	
170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala	Asn Phe Ser Glu Val Ser	
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val	
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys	
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val	
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn	
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser Trp	
260	265	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu	Met Leu Lys	
275	280	

<210> 292
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 292
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 293
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 20 25 30
 Gly Leu Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu
 35 40 45
 Gln Glu Met Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro
 50 55 60
 Phe Leu Leu Asn Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu
 65 70 75
 Ala Ser Thr Asp Leu Thr Leu Ala Val Pro Ile Cys Asn Ser Leu
 80 85 90
 Ala Ile Ile Phe Thr Leu Ile Val Gly Lys Ala Leu Gly Glu Asp
 95 100 105
 Ile Gly Gly Lys Arg Lys Leu Asp Tyr Cys Glu Cys Gly Thr Gln
 110 115 120
 Leu Cys Gly Ser Arg His Thr Cys Val Ser Ser Phe Pro Glu Pro
 125 130 135
 Ile Ser Pro Glu Trp Val Arg Thr Arg Pro Phe Pro Ile Leu Pro
 140 145 150

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

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Ser Cys Val Asn Ser Ile Ala Ser Glu Cys Pro Ser His Ala Asn
35 40 45
Thr Ser Cys Ile Ser Ser Ser Ala Ser Ser Ser Leu Glu Thr Pro
50 55 60
Val Arg Leu Tyr Gln Asn Met Phe Cys Ser Ala Glu Asn Cys Ser
65 70 75
Glu Glu Thr His Ile Thr Ala Phe Thr Val His Val Ser Ala Glu
80 85 90
Glu His Phe His Phe Val Ser Gln Cys Cys Gln Gly Lys Glu Cys
95 100 105
Ser Asn Thr Ser Asp Ala Leu Asp Pro Pro Leu Lys Asn Val Ser
110 115 120
Ser Asn Ala Glu Cys Pro Ala Cys Tyr Glu Ser Asn Gly Thr Ser
125 130 135
Cys Arg Gly Lys Pro Trp Lys Cys Tyr Glu Glu Glu Gln Cys Val
140 145 150
Phe Leu Val Ala Glu Leu Lys Asn Asp Ile Glu Ser Lys Ser Leu
155 160 165
Val Leu Lys Gly Cys Ser Asn Val Ser Asn Ala Thr Cys Gln Phe
170 175 180
Leu Ser Gly Glu Asn Lys Thr Leu Gly Gly Val Ile Phe Arg Lys
185 190 195
Phe Glu Cys Ala Asn Val Asn Ser Leu Thr Pro Thr Ser Ala Pro
200 205 210
Thr Thr Ser His Asn Val Gly Ser Lys Ala Ser Leu Tyr Leu Leu
215 220 225
Ala Leu Ala Ser Leu Leu Leu Arg Gly Leu Leu Pro
230 235

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

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Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30

Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45

Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60

Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	65		70		75
Arg Leu Ala Gly	Pro Ala Ala Ala Glu	Leu Leu Ala Ala Thr	Val		
	80	85	90		
Ser Thr Gly Phe	Ser Arg Ser Ser Ala	Ile Asn Glu Glu Asp	Gly		
	95	100	105		
Ser Ser Glu Glu	Gly Val Val Ile Asn	Ala Gly Lys Asp Ser	Thr		
	110	115	120		
Ser Arg Glu Leu	Pro Ser Ala Thr Pro	Asn Thr Ala Gly Ser	Ser		
	125	130	135		
Ser Thr Arg Phe	Ile Ala Asn Ser Gln	Glu Pro Glu Ile Arg	Leu		
	140	145	150		
Thr Ser Ser Leu	Pro Arg Ser Pro Gly	Arg Ser Thr Glu Asp	Leu		
	155	160	165		
Pro Gly Ser Gln	Ala Thr Leu Ser Gln	Trp Ser Thr Pro Gly	Ser		
	170	175	180		
Thr Pro Ser Arg	Trp Pro Ser Pro Ser	Pro Thr Ala Met Pro	Ser		
	185	190	195		
Pro Glu Asp Leu	Arg Leu Val Leu Met	Pro Trp Gly Pro Trp	His		
	200	205	210		
Cys His Cys Lys	Ser Gly Thr Met Ser	Arg Ser Arg Ser Gly	Lys		
	215	220	225		
Leu His Gly Leu	Ser Gly Arg Leu Arg	Val Gly Ala Leu Ser	Gln		
	230	235	240		
Leu Arg Thr Glu	His Lys Pro Cys Thr	Tyr Gln Gln Cys Pro	Cys		
	245	250	255		
Asn Arg Leu Arg	Glu Glu Cys Pro Leu	Asp Thr Ser Leu Cys	Thr		
	260	265	270		
Asp Thr Asn Cys	Ala Ser Gln Ser Thr	Thr Ser Thr Arg Thr	Thr		
	275	280	285		
Thr Thr Pro Phe	Pro Thr Ile His Leu	Arg Ser Ser Pro Ser	Leu		
	290	295	300		
Pro Pro Ala Ser	Pro Cys Pro Ala Leu	Ala Phe Trp Lys Arg	Val		
	305	310	315		
Arg Ile Gly Leu	Glu Asp Ile Trp Asn	Ser Leu Ser Ser Val	Phe		
	320	325	330		
Thr Glu Met Gln	Pro Ile Asp Arg Asn	Gln Arg			
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<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

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<210> 299
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 299
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 20 25 30
 Asp Cys Val Leu Gln Cys Glu Glu Gln Asn Cys Ser Gly Gly Ala
 35 40 45
 Leu Asn His Phe Arg Ser Arg Gln Pro Ile Tyr Met Ser Leu Ala
 50 55 60
 Gly Trp Thr Cys Arg Asp Asp Cys Lys Tyr Glu Cys Met Trp Val
 65 70 75

Thr Val Gly Leu Tyr	Leu Gln Glu Gly	His Lys Val Pro Gln Phe	80	85	90
His Gly Lys Trp	Pro Phe Ser Arg Phe	Leu Phe Phe Gln Glu Pro	95	100	105
Ala Ser Ala Val	Ala Ser Phe Leu Asn	Gly Leu Ala Ser Leu Val	110	115	120
Met Leu Cys Arg	Tyr Arg Thr Phe Val	Pro Ala Ser Ser Pro Met	125	130	135
Tyr His Thr Cys	Val Ala Phe Ala Trp	Val Ser Leu Asn Ala Trp	140	145	150
Phe Trp Ser Thr	Val Phe His Thr Arg	Asp Thr Asp Leu Thr Glu	155	160	165
Lys Met Asp Tyr	Phe Cys Ala Ser Thr	Val Ile Leu His Ser Ile	170	175	180
Tyr Leu Cys Cys	Val Arg Thr Val Gly	Leu Gln His Pro Ala Val	185	190	195
Val Ser Ala Phe	Arg Ala Leu Leu Leu	Leu Met Leu Thr Val His	200	205	210
Val Ser Tyr Leu	Ser Leu Ile Arg Phe	Asp Tyr Gly Tyr Asn Leu	215	220	225
Val Ala Asn Val	Ala Ile Gly Leu Val	Asn Val Val Trp Trp Leu	230	235	240
Ala Trp Cys Leu	Trp Asn Gln Arg Arg	Leu Pro His Val Arg Lys	245	250	255
Cys Val Val Val	Val Leu Leu Leu Gln	Gly Leu Ser Leu Leu Glu	260	265	270
Leu Leu Asp Phe	Pro Pro Leu Phe Trp	Val Leu Asp Ala His Ala	275	280	285
Ile Trp His Ile	Ser Thr Ile Pro Val	His Val Leu Phe Phe Ser	290	295	300
Phe Leu Glu Asp	Asp Ser Leu Tyr Leu	Leu Lys Glu Ser Glu Asp	305	310	315
Lys Phe Lys Leu	Asp		320		

<210> 300
 <211> 1674
 <212> DNA
 <213> Homo sapiens

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<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301
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 35 40 45
 Ser Ser Thr Lys Glu Thr Glu Arg Lys Glu Thr Lys Ala Glu Glu
 50 55 60
 Glu Leu Asp Ala Glu Val Leu Glu Val Phe His Pro Thr His Glu
 65 70 75
 Trp Gln Ala Leu Gln Pro Gly Gln Ala Val Pro Ala Gly Ser His
 80 85 90
 Val Arg Leu Asn Leu Gln Thr Gly Glu Arg Glu Ala Lys Leu Gln
 95 100 105
 Tyr Glu Asp Lys Phe Arg Asn Asn Leu Lys Gly Lys Arg Leu Asp
 110 115 120
 Ile Asn Thr Asn Thr Tyr Thr Ser Gln Asp Leu Lys Ser Ala Leu
 125 130 135
 Ala Lys Phe Lys Glu Gly Ala Glu Met Glu Ser Ser Lys Glu Asp
 140 145 150
 Lys Ala Arg Gln Ala Glu Val Lys Arg Leu Phe Arg Pro Ile Glu
 155 160 165
 Glu Leu Lys Lys Asp Phe Asp Glu Leu Asn Val Val Ile Glu Thr
 170 175 180
 Asp Met Gln Ile Met Val Arg Leu Ile Asn Lys Phe Asn Ser Ser
 185 190 195
 Ser Ser Ser Leu Glu Glu Lys Ile Ala Ala Leu Phe Asp Leu Glu
 200 205 210
 Tyr Tyr Val His Gln Met Asp Asn Ala Gln Asp Leu Leu Ser Phe
 215 220 225
 Gly Gly Leu Gln Val Val Ile Asn Gly Leu Asn Ser Thr Glu Pro
 230 235 240
 Leu Val Lys Glu Tyr Ala Ala Phe Val Leu Gly Ala Ala Phe Ser
 245 250 255
 Ser Asn Pro Lys Val Gln Val Glu Ala Ile Glu Gly Gly Ala Leu
 260 265 270
 Gln Lys Leu Leu Val Ile Leu Ala Thr Glu Gln Pro Leu Thr Ala
 275 280 285
 Lys Lys Lys Val Leu Phe Ala Leu Cys Ser Leu Leu Arg His Phe

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu Val Thr Glu Lys Met Phe		
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln Glu Met Ser Pro Glu Lys		
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu Leu Pro Gly Leu Trp Glu		
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His Leu Leu Ala Leu Pro Glu		
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr Leu Gly Val Leu Leu		
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln Asp Pro Gln Leu Gly Arg		
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr Gln Val Leu Ala Ser Leu		
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu Leu Arg		
455	460	

<210> 302
 <211> 2136
 <212> DNA
 <213> Homo sapiens

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<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303
 Met Gly Ala Ala Val Phe Phe Gly Cys Thr Phe Val Ala Phe Gly
 1 5 10 15
 Pro Ala Phe Ala Leu Phe Leu Ile Thr Val Ala Gly Asp Pro Leu
 20 25 30
 Arg Val Ile Ile Leu Val Ala Gly Ala Phe Phe Trp Leu Val Ser
 35 40 45
 Leu Leu Leu Ala Ser Val Val Trp Phe Ile Leu Val His Val Thr
 50 55 60
 Asp Arg Ser Asp Ala Arg Leu Gln Tyr Gly Leu Leu Ile Phe Gly
 65 70 75
 Ala Ala Val Ser Val Leu Leu Gln Glu Val Phe Arg Phe Ala Tyr
 80 85 90
 Tyr Lys Leu Leu Lys Lys Ala Asp Glu Gly Leu Ala Ser Leu Ser
 95 100 105
 Glu Asp Gly Arg Ser Pro Ile Ser Ile Arg Gln Met Ala Tyr Val
 110 115 120
 Ser Gly Leu Ser Phe Gly Ile Ile Ser Gly Val Phe Ser Val Ile
 125 130 135
 Asn Ile Leu Ala Asp Ala Leu Gly Pro Gly Val Val Gly Ile His
 140 145 150
 Gly Asp Ser Pro Tyr Tyr Phe Leu Thr Ser Ala Phe Leu Thr Ala
 155 160 165
 Ala Ile Ile Leu Leu His Thr Phe Trp Gly Val Val Phe Phe Asp
 170 175 180
 Ala Cys Glu Arg Arg Arg Tyr Trp Ala Leu Gly Leu Val Val Gly
 185 190 195
 Ser His Leu Leu Thr Ser Gly Leu Thr Phe Leu Asn Pro Trp Tyr
 200 205 210
 Glu Ala Ser Leu Leu Pro Ile Tyr Ala Val Thr Val Ser Met Gly
 215 220 225
 Leu Trp Ala Phe Ile Thr Ala Gly Gly Ser Leu Arg Ser Ile Gln
 230 235 240
 Arg Ser Leu Leu Cys Lys Asp
 245

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

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<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
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ccttcggnat catcagtggt gtntntctg ttatcaatat ttggctgat 150
gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200
cctganttca gccttntga cagcagccat tatcctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgccg ggttccagta cggcttctcg atttttggtg 50
ctgctgtntc tgtccttcta caggaggtgt tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgttnttggt nttccttcg 200
gtatcatcag tgggtttttn tctgttatca atattttggn tgatgcantt 250
gggccaggtg tggttgggat ccatggagan tcaccctatt aattcctgaa 300
ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg ggttttcggt ttccccctt 50
tccctttccc cggggtcttg ggtgacattg caccgggccc tcgtggggtc 100
gcggttgccac cccacgcgga ctccccagnt ggnngccctt tccattttgc 150
ctgtcctggt caggccccca ccccccttcc caentgacca gccatggggg 200
ctgcggtggt tttcggctgc actttcgtcg cgttcgggcc ggccttcgcg 250

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cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcactcctggt 300
 cgcaggggca tttttctggc tggctctccct gctcctggcc tctgtggtct 350
 ggttcactctt ggtccatgtg accgaccggg cagatgcccg gctccagtac 400
 ggccctcctga tttttgggtg tgtgtctctt gtccttctac aggaggtgtt 450
 ccgctttggc tactacaagc tgcttaagaa ggcagatgag gggttagcat 500
 cgctgagtga ggacggaaga tcacccatct ccatccgcc gatggcctat 550
 gtttctggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggct gatgcacttg ggccagggtg ggttgggatc catggagact 650
 cacc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cnttccccg ggtctggggg tgacattgca ccgcgccnt cgtggggtcg 100
 cgttgccacc ccacgaggac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctggtc agggcccccac ccccttccc acctgaccag ccatgggggc 200
 tgcgggtgtt ttgggggtgc actttcgtcg cgttcgggcc cggccttcgc 250
 gctttctctg atcactgtgg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctggtctccc tgcctcggc ctctgtggtc 350
 tggttcatct tggtcacgtg gaaccgacgg tcagatgcc ggctccagta 400
 cggcctcctg atttttgggt ctgctgtctc tgtccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggaaggaa atcacccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt gggccagggt tgggtgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
 gccccaggga gcagtggtg gttataactc agggccgggt cccagagccc 50


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ctggtgaggg tggctcagca ggcagggaag gagagggtgc tgtgcgtcct 200
gcacccacat cttctctctgt ccctccttg ccctgtctgg aggctgctag 250
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gccatggcta cagcaagacc ccctggatg tgggtgctct gtgctctgat 400
cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
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catcatcaat ggatccgact gcgatatgca caccagccg tggcagccg 600
cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650
ccacagtggc tgtcacggc cggccactgc aggaagaaa tttcagagt 700
ccgtctcgcc cactactccc tgtcaccagt ttatgaatct gggcagcaga 750
tgttccaggg ggtcaaatcc atccccacc ctggctactc ccacctggc 800
cactctaacg acctcatgct catcaaaactg aacagaagaa ttctccacc 850
taaagatgtc agaccatca acgtctctctc tcattgtccc tctgctggga 900
caaagtgcct ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
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ctgagaagtg gaaaaaaaaa 1570

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<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

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			20						25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
			35						40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
			50						55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
			65						70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
			80						85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
			95						100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
			110						115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
			125						130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
			140						145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
			155						160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
			170						175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
			185						190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
			200						205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
			215						220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
			230						235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
			245						250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
			260						265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
			275						280					285
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgtgtct ggccctggct gtgctgtgtg ctgtagctgt caccgggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgcgc ggcacggcgc cccacctgt 200
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 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
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 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu Ser	Ala Gln Ala Ser	Val Leu Gln Ala Leu Thr
110		115 120
Glu His Gln Ala Gln	Pro Arg Leu Val	Gly Asp Gln Glu Gln Glu
125		130 135
Leu Leu Asp Thr Leu	Ala Asp Gln Leu	Pro Arg Leu Leu Ala Arg
140		145 150
Ala Ser Glu Leu Gln	Thr Glu Cys Met	Gly Leu Arg Lys Gly His
155		160 165
Gly Thr Leu Gly Gln	Gly Leu Ser Ala	Leu Gln Ser Glu Gln Gly
170		175 180
Arg Leu Ile Gln Leu	Leu Ser Glu Ser	Gln Gly His Met Ala His
185		190 195
Leu Val Asn Ser Val	Ser Asp Ile Leu	Asp Ala Leu Gln Arg Asp
200		205 210
Arg Gly Leu Gly Arg	Pro Arg Asn Lys	Ala Asp Leu Gln Arg Ala
215		220 225
Pro Ala Arg Gly Thr	Arg Pro Arg Gly	Cys Ala Thr Gly Ser Arg
230		235 240
Pro Arg Asp Cys Leu	Asp Val Leu Leu	Ser Gly Gln Gln Asp Asp
245		250 255
Gly Val Tyr Ser Val	Phe Pro Thr His	Tyr Pro Ala Gly Phe Gln
260		265 270
Val Tyr Cys Asp Met	Arg Thr Asp Gly	Gly Trp Thr Val Phe
275		280 285
Gln Arg Arg Glu Asp	Gly Ser Val Asn	Phe Phe Arg Gly Trp Asp
290		295 300
Ala Tyr Arg Asp Gly	Phe Gly Arg Leu	Thr Gly Glu His Trp Leu
305		310 315
Gly Leu Lys Arg Ile	His Ala Leu Thr	Thr Gln Ala Ala Tyr Glu
320		325 330
Leu His Val Asp Leu	Glu Asp Phe Glu	Asn Gly Thr Ala Tyr Ala
335		340 345
Arg Tyr Gly Ser Phe	Gly Val Gly Leu	Phe Ser Val Asp Pro Glu
350		355 360
Glu Asp Gly Tyr Pro	Leu Thr Val Ala	Asp Tyr Ser Gly Thr Ala
365		370 375
Gly Asp Ser Leu Leu	Lys His Ser Gly	Met Arg Phe Thr Thr Lys
380		385 390
Asp Arg Asp Ser Asp	His Ser Glu Asn	Asn Cys Ala Ala Phe Tyr
395		400 405
Arg Gly Ala Trp Trp	Tyr Arg Asn Cys	His Thr Ser Asn Leu Asn
410		415 420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
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 ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
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 aatctcaaat ctcaatgcct tataagcatt cttcctctgt tccattaaga 1600
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 agtttcagtt cctattttct tccattgacc catatttata ctttcagggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp
1				5					10					15
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Phe	Phe	Gln	Tyr	
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 59, 95, 149, 331, 364, 438, 446
 <223> unknown base

 <400> 320
 aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50

 gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100

 cttttgccac aattcggcat ccagagcccc ggcgacaga gcacagggnt 150

 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200

 ggtgctgctg atagggtgg cagccctggg gcttttgctt tttcagtact 250

 accagctctc caatactggt caagacacca tttctcaa ggaagaaaga 300

 ttaggaaata cgtcccaaga gttgcaattt ntccaagtcc agaataataa 350

 gcttgacgga agntgcgac atgtggctga aaaactctgt cgtgagctgt 400

 ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450

 atacacacac cacttccc 468

<210> 321
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 321
 atgcaggcca agtacagcag cac 23

<210> 322
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 322
 catgctgacg acttctctgca agc 23

<210> 323
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 323
 ccacacagtc tctgcttctt ggg 23

<210> 324
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 324
atgctggatg atgatgggga caccacatg agcctgcatt 40

<210> 325
<211> 2988
<212> DNA
<213> Homo sapiens

<400> 325
gccgagcgca agaacctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgccgc tccggggatt cggctcgggc cgtggctct gctctgcggg 100
gagggagcgg gccgcgccg gggggcccgag ccctccggat cgcgccctc 150
cccggtcccg cccctcggga gaactcctctg gctgctctgg gggttcccg 200
gggcccggga cccgcgggtcc gggcgccatg cgggcacgc tgctgctgtc 250
ggtgctgcgg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350
cgcgcccaac ctgggagactc tgagctgcgc ccgcgcggca acaccaacgc 400
ggcgcgccgg cccaactcgg tcagagccgg agcggagcgc gagaagcccg 450
gggcccgcga aggcgcgggg gagaattggg agccgcgcgt cttgccctac 500
caccctgcac agcccgccca ggcgcgcaaa aagccgtca ggaccgcta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgctga 600
cctctcagac cagctgccc acgctggcg tggccgtgaa ccgcacgctg 650
gggcaccgga tggagcgtgt ggtgttcctg acgggcgcac gggccgcgcg 700
ggccccacct ggcattggcag tggtagcgt gggcagaggc cgaccattg 750
gacacctgca cctggcgctg cgccacctgc tggagcagca cggcgacgac 800
tttgactggt tcttctggt gcctgacacc acctacaccg aggcgcacgg 850
cctggcagcg ctaactggcc acctcagcct ggcctccgcc gccacctgt 900
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tactgccacg gagcctttgg ggtgctgctg tcgcgcacgc tgctgcaaca 1000
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actggtgacc acgagggggg gcactatagc catctggagc tgagccctgg 1150
ggagccagtg caggaggggg accctcattt ccgaagtgc ctgacagccc 1200
accctgtgcg tgaccctgtg cacatgtacc agctgcacaa agctttcgcc 1250
cgagctgaac tggaacgcac gtaccaggag atocaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
 ggcccggtgg tattccagca ccatcccgcc cggcctcccc ctttgaggtg 1400
 ctgcgctggg actacttcac ggagcagcac gctttctcct gcgcgatgg 1450
 ctaccccgcg tgcccactgc gtgggggtga ccgggctgat gtggccgatg 1500
 ttctggggac agctctagag gagctgaacc gccgtacca cccggccttg 1550
 cggctccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
 ccggggtatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
 agggaggcgg ccggccccc ctcgcccag tgcagctgct ccggccgctg 1700
 agcccgctgg agatcttgcc tgtgccctat gtcactgagg cctcacgtct 1750
 cactgtgctg ctgcctctag ctgcggctga gcgtgacctg gcccttggt 1800
 tcttgaggcg ctttgccact gcagcactgg agcctgggtg tgetgcggca 1850
 gccctgaccc tgctgctact gtatgagcgg ccgccaggcc agcgcgtggc 1900
 ccatgcagat gtcttcgcac ctgtcaaggc ccacgtggca gagctggagc 1950
 ggcgtttccc cggtgcccg gtgccatggc tcagtgtgca gacagccgca 2000
 ccctcaccac tgcgcctcat ggatctactc tccaagaagc acccgctgga 2050
 cacactgttc ctgctggcgg ggccagacac ggtgctcacg cctgacttcc 2100
 tgaaccgctg ccgcatgcat gccatctcgg gctggcaggc cttcttccc 2150
 atgcatttcc aagccttcca ccaggtgtg gccccaccac aaggcgctgg 2200
 gcccccagag ctggggcgtg acactggccg ctttgatcgc caggcagcca 2250
 gcgaggcctg cttctacaac tccgactaog tggcagcccg tggcgccctg 2300
 gcggcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
 cgagctgttc ctccacttct ccagtctgca tgtgctcggg gcggtggagc 2400
 cggcgctgct gcagcgctac cggggcccaga cgtgcagcgc gaggtcagct 2450
 gaggacctgt accaccgctg cctccagagc gtgcttgagg gcctcggtc 2500
 ccgaaccagc ctggccatgc taactcttga acaggagcag ggcaacagca 2550
 cctgacccca cctgtcccc gtgggcgctg gcatggccac accccacccc 2600
 attctctccc caaaaccaga gccacctgcc agcctcgctg ggcagggctg 2650
 gccgtagcca gacccaagc tggcccactg gtccctctc tggctctgtg 2700
 ggtccctggg ctctggacaa gcactggggg acgtgcccc agagccaccc 2750
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 gctgtggcct ccacgtattt atgcagtaca gtctgctga cggcagccct 2850
 gcctctgggc cctgggggct gggctgtaga agagtgttg gggaaggagg 2900

gagctgagga gggggcatct cccaacttct ccccttttga ccctgccgaa 2950
gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326
<211> 775
<212> PRT
<213> Homo sapiens

<400> 326
Met Arg Ala Ser Leu Leu Leu Ser Val Leu Arg Pro Ala Gly Pro
1 5 10
Val Ala Val Gly Ile Ser Leu Gly Phe Thr Leu Ser Leu Leu Ser
20 25 30
Val Thr Trp Val Glu Glu Pro Cys Gly Pro Gly Pro Pro Gln Pro
35 40 45
Gly Asp Ser Glu Leu Pro Pro Arg Gly Asn Thr Asn Ala Ala Arg
50 55 60
Arg Pro Asn Ser Val Gln Pro Gly Ala Glu Arg Glu Lys Pro Gly
65 70 75
Ala Gly Glu Gly Ala Gly Glu Asn Trp Glu Pro Arg Val Leu Pro
80 85 90
Tyr His Pro Ala Gln Pro Gly Gln Ala Ala Lys Lys Ala Val Arg
95 100 105
Thr Arg Tyr Ile Ser Thr Glu Leu Gly Ile Arg Gln Arg Leu Leu
110 115 120
Val Ala Val Leu Thr Ser Gln Thr Thr Leu Pro Thr Leu Gly Val
125 130 135
Ala Val Asn Arg Thr Leu Gly His Arg Leu Glu Arg Val Val Phe
140 145 150
Leu Thr Gly Ala Arg Gly Arg Arg Ala Pro Gly Met Ala Val
155 160 165
Val Thr Leu Gly Glu Glu Arg Pro Ile Gly His Leu His Leu Ala
170 175 180
Leu Arg His Leu Leu Glu Gln His Gly Asp Asp Phe Asp Trp Phe
185 190 195
Phe Leu Val Pro Asp Thr Thr Tyr Thr Glu Ala His Gly Leu Ala
200 205 210
Arg Leu Thr Gly His Leu Ser Leu Ala Ser Ala Ala His Leu Tyr
215 220 225
Leu Gly Arg Pro Gln Asp Phe Ile Gly Gly Glu Pro Thr Pro Gly
230 235 240
Arg Tyr Cys His Gly Gly Phe Gly Val Leu Leu Ser Arg Met Leu
245 250 255
Leu Gln Gln Leu Arg Pro His Leu Glu Gly Cys Arg Asn Asp Ile
260 265 270

Val Ser Ala Arg	Pro Asp Glu Trp Leu	Gly Arg Cys Ile Leu	Asp
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His	Tyr
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly	Asp
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp	Pro
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu	Leu
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile	Gln
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala	Trp
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe	Glu
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser	Cys
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg	Ala
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn	Arg
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val	Asn
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr	Leu
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg	Pro
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val	Glu
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr	Val
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly	Phe
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala	Ala
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Tyr	Glu Pro Arg Gln Ala	Gln
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His	Val
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp	Leu
	575	580	585

Ser Val Gln Thr Ala Ala Pro Ser Pro Leu Arg Leu Met Asp Leu
 590 595 600
 Leu Ser Lys Lys His Pro Leu Asp Thr Leu Phe Leu Leu Ala Gly
 605 610 615
 Pro Asp Thr Val Leu Thr Pro Asp Phe Leu Asn Arg Cys Arg Met
 620 625 630
 His Ala Ile Ser Gly Trp Gln Ala Phe Phe Pro Met His Phe Gln
 635 640 645
 Ala Phe His Pro Gly Val Ala Pro Pro Gln Gly Pro Gly Pro Pro
 650 655 660
 Glu Leu Gly Arg Asp Thr Gly Arg Phe Asp Arg Gln Ala Ala Ser
 665 670 675
 Glu Ala Cys Phe Tyr Asn Ser Asp Tyr Val Ala Ala Arg Gly Arg
 680 685 690
 Leu Ala Ala Ala Ser Glu Gln Glu Glu Glu Leu Leu Glu Ser Leu
 695 700 705
 Asp Val Tyr Glu Leu Phe Leu His Phe Ser Ser Leu His Val Leu
 710 715 720
 Arg Ala Val Glu Pro Ala Leu Leu Gln Arg Tyr Arg Ala Gln Thr
 725 730 735
 Cys Ser Ala Arg Leu Ser Glu Asp Leu Tyr His Arg Cys Leu Gln
 740 745 750
 Ser Val Leu Glu Gly Leu Gly Ser Arg Thr Gln Leu Ala Met Leu
 755 760 765
 Leu Phe Glu Gln Glu Gln Gly Asn Ser Thr
 770 775

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 329
 atgggctcagt gtgcagacag 20

 <210> 330
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 330
 gcatgctgct ccgtgaagta gtcc 24

 <210> 331
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 331
 atgcatggga aagaaggcct gccc 24

 <210> 332
 <211> 47
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 332
 tgcactgggtg accacgaggg ggtgcactat agccatctgg agctgag 47

 <210> 333
 <211> 1095
 <212> DNA
 <213> Homo sapiens

 <400> 333
 gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
 gcctcctctg attggcaagc gctggccacc tccccacacc ccttgcaaac 100
 gctcccctag tggagaaaag gagtagctat tagccaatto ggcaggggccc 150
 gctttttaga agcttgattt cttttgaaga tgaaagacta gcggaagctc 200
 tgctcttttc ccagctgggc gagggaactc ggggcgattg gctgggaact 250
 gtatccaccc aaatgtcacc gattttcttc tatgcaggaa atgagcagac 300
 ccataataa gaaattttctc agcctggccg aaaaatgggtg gccccacgaa 350
 gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaacccaat cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgcccctga gaccctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgcctcttt ttggcggcag cggcgacgcg agggctcccg 600
 gccgcccgcg tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtccgctgtg gcgggaaagc ggccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa ccagactcc 750
 catggttatg acaaggaccg cgttttggac gtctggaaca tgcgacttgt 800
 cttctctttt ggcgtctcca tcctcttgtt ccttggcagc acctttgttg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgcg cgaagctgag 900
 aggccttgta aataccgaga ggccaatggc cttcccatca tggaatccaa 950
 ctgcttcgac cccagcaaga tccagctgcc agaggatgag tgaccagtgt 1000
 ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagc ggctgaaagt ctgaa 1095

<210> 334
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 334
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala
 1 5 10 15
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu
 20 25 30
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
 35 40 45
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
 50 55 60
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
 65 70 75
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
 80 85 90
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
 95 100 105
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
 110 115 120
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
 125 130 135
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
 140 145 150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttggtt tgagcgctcg ccgtottttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgcgctc gctgggaate tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaagcggc ccccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgtatg 200
agaagaaccc agactcccat ggttatgaca aggaccccg tttggacgtc 250
tggaacatgc gacttgtctt ctcttttggc gtctccatca tcttggtcct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350
cccgccgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgttttt gagcccaact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
tgggtggcctg gtgctacggc tccttctaca atctcctcac ccgaaccttc 1650
cacatcgagg agccccgcac aggtggcctg gccaaaggcg tggccaacct 1700
tatccggcgc gcccgagggtg tccccccact ctgattcttg ccttttcoag 1750
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tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttctt cacctgtagt 1950
ggccacctct atattgaggt gctcaataag caaaagtggg cggtggctgc 2000
tgtattggac agcacagaaa aagattttcca tcaccacaga aagtcggct 2050
ggcagcactg gccaaaggta tgggggtgtc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaaaa aa 2162

<210> 340
<211> 574
<212> PRT
<213> Homo sapiens

<400> 340
Met Pro Leu Ala Leu Leu Val Leu Leu Leu Gly Pro Gly Gly
1 5 10 15
Trp Cys Leu Ala Glu Pro Pro Arg Asp Ser Leu Arg Glu Glu Leu
20 25 30
Val Ile Thr Pro Leu Pro Ser Gly Asp Val Ala Ala Thr Phe Gln
35 40 45
Phe Arg Thr Arg Trp Asp Ser Glu Leu Gln Arg Glu Gly Val Ser
50 55 60
His Tyr Arg Leu Phe Pro Lys Ala Leu Gly Gln Leu Ile Ser Lys
65 70 75
Tyr Ser Leu Arg Glu Leu His Leu Ser Phe Thr Gln Gly Phe Trp
80 85 90
Arg Thr Arg Tyr Trp Gly Pro Pro Phe Leu Gln Ala Pro Ser Gly
95 100 105
Ala Glu Leu Trp Val Trp Phe Gln Asp Thr Val Thr Asp Val Asp
110 115 120
Lys Ser Trp Lys Glu Leu Ser Asn Val Leu Ser Gly Ile Phe Cys
125 130 135
Ala Ser Leu Asn Phe Ile Asp Ser Thr Asn Thr Val Thr Pro Thr
140 145 150

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg Glu Val Val Cys Thr Glu		170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val Leu Ser Ala	Leu Val Pro Ser Met	Val Ala Ala Lys Pro	Val
	470	475	480
Asp Trp Glu Glu	Ser Pro Leu Phe Asn	Ser Leu Phe Pro	Val Ser
	485	490	495
Asp Gly Ser Asn	Tyr Phe Val Arg Leu	Tyr Thr Glu Pro	Leu Leu
	500	505	510
Val Asn Leu Pro	Thr Pro Asp Phe Ser	Met Pro Tyr Asn	Val Ile
	515	520	525
Cys Leu Thr Cys	Thr Val Val Ala Val	Cys Tyr Gly Ser	Phe Tyr
	530	535	540
Asn Leu Leu Thr	Arg Thr Phe His Ile	Glu Glu Pro Arg	Thr Gly
	545	550	555
Gly Leu Ala Lys	Arg Leu Ala Asn Leu	Ile Arg Arg Ala	Arg Gly
	560	565	570

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggctct catggtgtct ctctgtcttg 50
 tgaccttggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
 gtttgcacag ctgacaacgt acgctgcttc aagtcagatc ctccccagtg 150
 tcacacagac caggactgtc tgggggaaaag gaagtgtgtg tacctgcact 200
 gtggcttcaa gtgtgtgatt cctgtgaag aactggaaga aggaggaaa 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
 gtgtccaggc tctctctcta ccagggtgtc tcagaaatga tgcgtgggtcc 350
 tttctacctc tgggggtcac tctcaacttg cactgcccc tgagggtcct 400
 gagacttggg atatggaaga agcaataccc aacccccacca aagaaaacct 450
 gagcttgaag tctttttccc caaaaaggagg gaagagtcac aaaaagtcca 500
 gaccccgagg acggtacttt cctctcttac ctggtgctcc tccctaattg 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcatgagaag agaaactggg cctcaccaga tgcgtgaatct gctggtgctc 700
 tgatcttggg ctctccagcc tctagaactg taagaaataa atatttgcgtg 750
 tttataatcc aa 762

<210> 345
 <211> 111
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
 1 5 10 15
 Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
 20 25 30
 Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
 35 40 45
 Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
 50 55 60
 Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
 65 70 75
 Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
 80 85 90
 Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
 95 100 105
 Thr Arg Cys Pro Gln Lys
 110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
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 ttctctggcca ggaacacctga gcggtgagac tccagctgc ctacatcaag 100
 gcccacggac atgcagaacc ttctctctaga acccgaccca ccaccatgag 150
 gtctctgctg tggagatgca ggcacctgag ccaaggcgtc cagtggctct 200
 tgcttctggc tgtctgtgtc ttctttctct tcgcttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
 agaaaggctc ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaaccacgac caaggccac accaccggag acagagggaaa 450
 ggaggccaac caggcacgcg cggaggagca ggacaagggt cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
 aactgtctac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggcacaatca tggaagagcc aggacacaaa gacgaccca ggaaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagcgcctc attcccaaaa gtcagcacag 750
 aatgtcggtc cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
 tgaccacagc agtcatocca cctaaggaga agaaacctca ggccacocca 850
 cccctgccc ctttccagag cccacgacg cagagaaaac aaagactgaa 900
 ggccgccaac ttcaaatctg agcctcgggt ggattttgag gaaaaataca 950
 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgtgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctctctctg gactccagac acttcaacca gagtgtgtgg gaccgcctgg 1100
 aacactttgc accacccttt ggcttcatgg agctcaacta ctcttgggtg 1150
 cagaaggtcg tgacacgctt cctccagtg ccccgacagc agctgtcctc 1200
 ggccagcctc cccgtggga gctccgggtg catcacctgt gccgtggtgg 1250
 gcaacggggg catctgaac aactcccaca tgggccagga gatagacagt 1300
 cagactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtgggg actcggacat ccttctacg ctttaccgcc ttctcctgta 1400
 cccagtcact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttcoctg gaaggcaccg gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctgggtcag gcacagaccc caggaagctt ttcgggaagc cctgcacatg 1600
 gacaggtacc tgttgcgtca cccagacttt ctccgataca tgaagaacag 1650
 gtttctgagg tctaagaccc tggatgggtc cactggagg atataccgcc 1700
 ccaccactgg ggccctcctg ctgctcactg cccttcagct ctgtgaccag 1750
 gtgagtgcct atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aaccatgact 1850
 tcaagctgga gagagaagtc tggaaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctcttgctc gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccattggctca gactaagctc 2050
 caagcccttc aggagttcca agggaacact tgaacctagg acaagactct 2100
 ctcaagatgg caaatggcta attgagggtc tgaagtctct cagtacattg 2150
 ctgtagggtc tgaggccagg gatttttaat taaatggggt gatgggtggc 2200
 caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaato ttgaaggat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgtc ttttaagctat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattgtt gtccatggaa agggcaataa 2500
 attttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

					65					70					75
Tyr	Ala	Glu	Pro	Ala	Pro	Glu	Asn	Asn	Ala	Leu	Asn	Thr	Gln	Thr	80
Gln	Pro	Lys	Ala	His	Thr	Thr	Gly	Asp	Arg	Gly	Lys	Glu	Ala	Asn	85
Gln	Ala	Pro	Pro	Glu	Glu	Gln	Asp	Lys	Val	Pro	His	Thr	Ala	Gln	90
Arg	Ala	Ala	Trp	Lys	Ser	Pro	Glu	Lys	Glu	Lys	Thr	Met	Val	Asn	95
Thr	Leu	Ser	Pro	Arg	Gly	Gln	Asp	Ala	Gly	Met	Ala	Ser	Gly	Arg	100
Thr	Glu	Ala	Gln	Ser	Trp	Lys	Ser	Gln	Asp	Thr	Lys	Thr	Thr	Gln	105
Gly	Asn	Gly	Gly	Gln	Thr	Arg	Lys	Leu	Thr	Ala	Ser	Arg	Thr	Val	110
Ser	Glu	Lys	His	Gln	Gly	Lys	Ala	Ala	Thr	Thr	Ala	Lys	Thr	Leu	115
Ile	Pro	Lys	Ser	Gln	His	Arg	Met	Leu	Ala	Pro	Thr	Gly	Ala	Val	120
Ser	Thr	Arg	Thr	Arg	Gln	Lys	Gly	Val	Thr	Thr	Ala	Val	Ile	Pro	125
Pro	Lys	Glu	Lys	Lys	Pro	Gln	Ala	Thr	Pro	Pro	Pro	Ala	Pro	Phe	130
Gln	Ser	Pro	Thr	Thr	Gln	Arg	Asn	Gln	Arg	Leu	Lys	Ala	Ala	Asn	135
Phe	Lys	Ser	Glu	Pro	Arg	Trp	Asp	Phe	Glu	Glu	Lys	Tyr	Ser	Phe	140
Glu	Ile	Gly	Gly	Leu	Gln	Thr	Thr	Cys	Pro	Asp	Ser	Val	Lys	Ile	145
Lys	Ala	Ser	Lys	Ser	Leu	Trp	Leu	Gln	Lys	Leu	Phe	Leu	Pro	Asn	150
Leu	Thr	Leu	Phe	Leu	Asp	Ser	Arg	His	Phe	Asn	Gln	Ser	Glu	Trp	155
Asp	Arg	Leu	Glu	His	Phe	Ala	Pro	Pro	Phe	Gly	Phe	Met	Glu	Leu	160
Asn	Tyr	Ser	Leu	Val	Gln	Lys	Val	Val	Thr	Arg	Phe	Pro	Pro	Val	165
Pro	Gln	Gln	Gln	Leu	Leu	Leu	Ala	Ser	Leu	Pro	Ala	Gly	Ser	Leu	170
Arg	Cys	Ile	Thr	Cys	Ala	Val	Val	Gly	Asn	Gly	Gly	Ile	Leu	Asn	175
Asn	Ser	His	Met	Gly	Gln	Glu	Ile	Asp	Ser	His	Asp	Tyr	Val	Phe	180

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr			Gln
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590	595			600

<210> 348
 <211> 496
 <212> DNA
 <213> Homo sapiens

<400> 348
 cgatgcgcgg acccgggcac cccctctctc tggggctgct gctgggtgctg 50
 gggccttcgc cggagcagcg agtggaaatt gttcctcgag atctgaggat 100
 gaaggacaag tttctaaaac accttacagc cctctttat tttagtccaa 150
 agtgcagcaa acacttccat agactttatc acaacaccag agactgcacc 200
 attcctgcat actataaaag atgcgccagg cttcttaacc ggotggctgt 250
 cagtccagtg tgcatggagg ataagtgagc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

ctttatacac atccccatcatt ggacaagaga tttatttttg cagacagact 400
 cttccataag tccttttgagt tttgtatgtt gttgacagtt tgcagatata 450
 tattogataa atcagtgtagc ttgacagtgt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90
 Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctgggcc ccgcgcgagc tcagctggc cggettggc ctgcggtccc 50
 ttctctggga ggcccgaccc cggccgcgcc cagcccccac catgccaccc 100
 ggggggtccc gcggggcgcc gccgctcacc gcaatcgctc tgggtggtgt 150
 ggggggtccc ctgggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg ggggttaact gcgagttctt cacctctctg 250
 tgcgggacct gctaccatcg gtactgtctc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgctggc cttcagcccc aagaccatag 350
 caggcatcgc ctacagctgtg atcctctttt ttgctgtggt tgccaccacc 400
 atctgtgtct tcctctgttc ctgttgctac ctgtacggcc ggcgccagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcaccccag 500
 tgcagccagt ataccatata cccagggacc ccaaagctgg cctgcacccc 550
 ccacagcctg gcttcatgta cccacctagt ggtcctgtct cccaatatcc 600

actctaccga gctgggcccc cagtctacaa cctgcagct cctctccct 650
 atatgccacc acagccctct taccggggag cctgaggaaac cagccatgtc 700
 tctgctgccc cttcagtgat gccaaccttg ggagatgccc tcctcctgta 750
 cctgcactctg gtccctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc aggggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900
 atgggctatt tttactgggg gcaagggagg gagatgacag cctgggtcac 950
 agtgccctgt ttcaaatagt cctctgtctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt cccctctggg ctgggggtggg gggaggggag 1050
 aggttcctgc agcagctggc agtagccctc ctctctggct gccccactgg 1100
 ccacatctct ggccctgctag attaaagctg taaagacaaa a 1141

<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
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 Ala Leu Leu Val Leu Gly Ala Pro Leu Val Leu Ala Gly Glu Asp
 20 25 30
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe
 35 40 45
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg
 50 55 60
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln
 65 70 75
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala
 80 85 90
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys
 95 100 105
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln
 110 115 120
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile
 125 130 135
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly
 140 145 150
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro
 155 160 165
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn
 170 175 180

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
gggggagcta ggccggcggc agtggtggtg gcggcggcgc aagggtgagg 50
goggcccccag aaccccaggt aggtagagca agaagatggt gtttctgccc 100
ctcaaagtgt ccoctgcaac catgtcattt ctactttctt cactgttgge 150
tctcttaact gtgtccactc ettcattggtg tcagagcact gaagcatctc 200
caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttctt 250
gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
ccaccagcac catcatctg catagtcacc acctgcagat atctaggggc 400
accctcagga agggagctgg agagaggcta tcggaagaac cctgcaggt 450
cctggaacac cccctcagg agcaaatgac actgctggct ccgagagccc 500
tcctgtctgg gctccgtac acagttgtca ttactatgc tggcaatctt 550
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aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
gaaatctgtg actgttgctg aaggactcat agaagaccat ttgatgtca 800
ctgtgaagat gagcacctat ctggtggcct tcatcattc agattttgag 850
tctgtcagca agataacca gagtgagtc aaggtttctg ttatgtctgt 900
gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000
caagatcttg ctgctattcc cgaatttcag tctggtgcta tggaaaactg 1050
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
cttctgcac cagtaagctt ggcacacag tgactgtggc ccatgaactg 1150
gccccaccagt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
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gagcgaatgg aggtagatgc tttaaatcc tcacaccctg tgtctacacc 1350
 tgtggaaat cctgctcaga tccgggagat gtttgatgat gtttcttatg 1400
 ataagggagc ttgtattctg aatatgctaa gggagtatct tagcgctgac 1450
 gcatttaaaa gtgggtattgt acagtatctc cagaagcata gctataaaaa 1500
 tacaaaaaac gaggaacctgt gggatagtat ggcaagtatt tgcctacag 1550
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 cacttgaca ctgcagaggg gttttccct aataaccatc acagtgagg 1700
 ggaggaatgt acacatgaag caagagcact acatgaagg cctctgacgc 1750
 gcccggaca ctgggtacct gtggcatgtt ccattgacat tcctcaccag 1800
 caaatccaac atggtccatc gatttttgct aaaaacaaa acagatgtgc 1850
 tcctctccc agaagagggt gaatggatca aatttaatgt gggcatgaat 1900
 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950
 cttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
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 aaggccttg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100
 cgtgttcaa gggttgaaat agctgattcc tatgtataag ttaattggaga 2150
 aaagagatat gaatgaagtg gaaactcaat tcaaggcctt cctcatcagg 2200
 ctgctaagg acctcattga taagcagaca tggacagacg agggctcagt 2250
 ctgagagcaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300
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 gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtgtt 2400
 tgcgtgggg gccagagca cagaaggctg ggattttctt tatagtaaat 2450
 atcagttttc ttgtccagt actgagaaaa gccaaattga atttgccctc 2500
 tgcagaacc aaaataagga aaagcttcaa tggctactag atgaagcctt 2550
 taaggagatg aaaaaaaa ctcaggagtt tccacaaatt cttacactca 2600
 ttggcaggaa ccagtagga taccactgg cctggcaatt tctgaggaaa 2650
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 ccacatggtg atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750
 aagaggtaaa aggattcttc agctctttga aagaaatgg ttctcagctc 2800
 cgttgtgtcc aacagacaat tgaaccatt gaagaaaaca tcggttgat 2850
 ggataagaat ttgtataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccgg ttctgttat ctctaatac 2950
 caacattttg ttgagtgtat tttcaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc ctccaactca ttttttgact atccctgtga 3050
 aaagaatagc tgttagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tcgtaccat gtgttttgtt catcacaggt gttgccctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacott attcttctca 3200
 aaaaaaaaa aaaaaaaaa aaaaaa 3226

<210> 353

<211> 941

<212> PRT

<213> Homo sapiens

<400> 353

Met	Val	Phe	Leu	Pro	Leu	Lys	Trp	Ser	Leu	Ala	Thr	Met	Ser	Phe
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Leu	Leu	Ser	Ser	Leu	Leu	Ala	Leu	Leu	Thr	Val	Ser	Thr	Pro	Ser
				20					25					30
Trp	Cys	Gln	Ser	Thr	Glu	Ala	Ser	Pro	Lys	Arg	Ser	Asp	Gly	Thr
				35					40					45
Pro	Phe	Pro	Trp	Asn	Lys	Ile	Arg	Leu	Pro	Glu	Tyr	Val	Ile	Pro
				50					55					60
Val	His	Tyr	Asp	Leu	Leu	Ile	His	Ala	Asn	Leu	Thr	Thr	Leu	Thr
				65					70					75
Phe	Trp	Gly	Thr	Thr	Lys	Val	Glu	Ile	Thr	Ala	Ser	Gln	Pro	Thr
				80					85					90
Ser	Thr	Ile	Ile	Leu	His	Ser	His	His	Leu	Gln	Ile	Ser	Arg	Ala
				95					100					105
Thr	Leu	Arg	Lys	Gly	Ala	Gly	Glu	Arg	Leu	Ser	Glu	Glu	Pro	Leu
				110					115					120
Gln	Val	Leu	Glu	His	Pro	Pro	Gln	Glu	Gln	Ile	Ala	Leu	Leu	Ala
				125					130					135
Pro	Glu	Pro	Leu	Leu	Val	Gly	Leu	Pro	Tyr	Thr	Val	Val	Ile	His
				140					145					150
Tyr	Ala	Gly	Asn	Leu	Ser	Glu	Thr	Phe	His	Gly	Phe	Tyr	Lys	Ser
				155					160					165
Thr	Tyr	Arg	Thr	Lys	Glu	Gly	Glu	Leu	Arg	Ile	Leu	Ala	Ser	Thr
				170					175					180
Gln	Phe	Glu	Pro	Thr	Ala	Ala	Arg	Met	Ala	Phe	Pro	Cys	Phe	Asp
				185					190					195
Glu	Pro	Ala	Phe	Lys	Ala	Ser	Phe	Ser	Ile	Lys	Ile	Arg	Arg	Glu
				200					205					210
Pro	Arg	His	Leu	Ala	Ile	Ser	Asn	Met	Pro	Leu	Val	Lys	Ser	Val

					215					220					225
Thr	Val	Ala	Glu	Gly	Leu	Ile	Glu	Asp	His	Phe	Asp	Val	Thr	Val	240
				230					235						
Lys	Met	Ser	Thr	Tyr	Leu	Val	Ala	Phe	Ile	250	Ile	Ser	Asp	Phe	Glu
				245					255						255
Ser	Val	Ser	Lys	Ile	Thr	Lys	Ser	Gly	Val	265	Lys	Val	Ser	Val	Tyr
				260					265						270
Ala	Val	Pro	Asp	Tys	Ile	Asn	Gln	Ala	Asp	280	Tyr	Ala	Leu	Asp	Ala
				275					280						285
Ala	Val	Thr	Leu	Leu	Glu	Phe	Tyr	Glu	Asp	295	Tyr	Phe	Ser	Ile	Pro
				290					295						300
Tyr	Pro	Leu	Pro	Lys	Gln	Asp	Leu	Ala	Ala	310	Ile	Pro	Asp	Phe	Gln
				305					310						315
Ser	Gly	Ala	Met	Glu	Asn	Trp	Gly	Leu	Thr	325	Thr	Tyr	Arg	Glu	Ser
				320					325						330
Ala	Leu	Leu	Phe	Asp	Ala	Glu	Lys	Ser	Ser	340	Ala	Ser	Ser	Lys	Leu
				335					340						345
Gly	Ile	Thr	Val	Thr	Val	Ala	His	Glu	Leu	355	Ala	His	Gln	Trp	Phe
				350					355						360
Gly	Asn	Leu	Val	Thr	Met	Glu	Trp	Trp	Asn	370	Asp	Leu	Trp	Leu	Asn
				365					370						375
Glu	Gly	Phe	Ala	Lys	Phe	Met	Glu	Phe	Val	385	Ser	Val	Ser	Val	Thr
				380					385						390
His	Pro	Glu	Leu	Lys	Val	Gly	Asp	Tyr	Phe	400	Phe	Gly	Lys	Cys	Phe
				395					400						405
Asp	Ala	Met	Glu	Val	Asp	Ala	Leu	Asn	Ser	415	Ser	His	Pro	Val	Ser
				410					415						420
Thr	Pro	Val	Glu	Asn	Pro	Ala	Gln	Ile	Arg	430	Glu	Met	Phe	Asp	Asp
				425					430						435
Val	Ser	Tyr	Asp	Lys	Gly	Ala	Cys	Ile	Leu	445	Asn	Met	Leu	Arg	Glu
				440					445						450
Tyr	Leu	Ser	Ala	Asp	Ala	Phe	Lys	Ser	Gly	460	Ile	Val	Gln	Tyr	Leu
				455					460						465
Gln	Lys	His	Ser	Tyr	Lys	Asn	Thr	Lys	Asn	475	Glu	Asp	Leu	Trp	Asp
				470					475						480
Ser	Met	Ala	Ser	Ile	Cys	Pro	Thr	Asp	Gly	490	Val	Lys	Gly	Met	Asp
				485					490						495
Gly	Phe	Cys	Ser	Arg	Ser	Gln	His	Ser	Ser	505	Ser	Ser	Ser	His	Trp
				500					505						510
His	Gln	Glu	Gly	Val	Asp	Val	Lys	Thr	Met	520	Met	Asn	Thr	Trp	Thr
				515					520						525
Leu	Gln	Arg	Gly	Phe	Pro	Leu	Ile	Thr	Ile	530	Thr	Val	Arg	Gly	Arg
				525					530						535

Asn Val His Met	530	Lys Gln Glu His Tyr	535	Met Lys Gly Ser Asp	540	Gly
	545		550			555
Ala Pro Asp Thr	Gly Tyr Leu Trp His	Val Pro Leu Thr Phe	Ile			
	560		565			570
Thr Ser Lys Ser	Asn Met Val His Arg	Phe Leu Leu Lys Thr	Lys			
	575		580			585
Thr Asp Val Leu	Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys	Phe			
	590		595			600
Asn Val Gly Met	Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp	Asp			
	605		610			615
Gly Trp Asp Ser	Leu Thr Gly Leu Leu	Lys Gly Thr His Thr	Ala			
	620		625			630
Val Ser Ser Asn	Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe	Gln			
	635		640			645
Leu Val Ser Ile	Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp	Leu			
	650		655			660
Ser Leu Tyr Leu	Lys His Glu Thr Glu	Ile Met Pro Val Phe	Gln			
	665		670			675
Gly Leu Asn Glu	Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys	Arg			
	680		685			690
Asp Met Asn Glu	Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile	Arg			
	695		700			705
Leu Leu Arg Asp	Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu	Gly			
	710		715			720
Ser Val Ser Glu	Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu	Ala			
	725		730			735
Cys Val His Asn	Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly	Tyr			
	740		745			750
Phe Arg Lys Trp	Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro	Val			
	755		760			765
Asp Val Thr Leu	Ala Val Phe Ala Val	Gly Ala Gln Ser Thr	Glu			
	770		775			780
Gly Trp Asp Phe	Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser	Ser			
	785		790			795
Thr Glu Lys Ser	Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln	Asn			
	800		805			810
Lys Glu Lys Leu	Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly	Asp			
	815		820			825
Lys Ile Lys Thr	Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile	Gly			
	830		835			840
Arg Asn Pro Val	Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg	Lys			

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser			
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg			
	875		880		885
Thr Arg Leu Glu Glu	Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu			
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile			
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg			
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Val Trp Leu Gln	Ser Glu Lys Leu Glu Arg Met				
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<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
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 gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggacccctaa 150
 gaacaccagc tgcgacacgc gcttgggggt ccaggacacg ttgatgtcca 200
 ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
 gccaggagcc aggagccccg cgtcactgag caccggatgg gccccggcct 300
 ctccctgato tctacacct tcgtgtgccc ccaggaggac ttctgcaaca 350
 acctcgtaa ctccctccc ctttggggccc cacagcccc agcagaccca 400
 ggatccttga ggtgccaggt ctgcttgtct atggaaggct gtcctggagg 450
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 tcctcaggct caggggagga ggcactctct ccaatctgag agtccaggga 550
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 cactcagccc ctccctgggt gcttgtggcc tcctataccc acttctgtct 900
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 cagggggcgcc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcaggggt gcggtggcca acctccagc 1150
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 gcttgagatc totcacttgg ggggtggggc tggcactggc cccacgctg 1300
 tgggtggggag tggtttgccc ttctgtctaa ctctattacc cccacgattc 1350
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 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
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 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
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Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
			20						25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
			35						40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
			50						55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
			65						70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
			80						85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
			95						100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
			110						115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
			125						130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
			140						145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

[illegible]

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<210> 356
<211> 1238
<212> DNA
<213> Homo sapiens
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 tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200
 tgcgggagag aaggagagaca aaggcgcccc cgacggcct ggaagagtcg 250
 gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300
 gtgggtcgtc atggaaaaat tggctccatt ggctctaaag gtgagaaagg 350
 agattccggg gacataggac cccctggctc taatggagaa ccagccctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggaacaaccg 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtgcgcgg 500
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 aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gaggttcatt 1100
 acctgtattg tagcccaaat gtcattatgt aattattacc cagaattgct 1150
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 tagtgcagta gttaagtcca aaaaaaaaa aaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
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 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	260	265	270

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

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gttccttgat cctgccagac caccagccc ccggcacaga gctgctccac 150

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<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu
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Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20					25					30
Val	Pro	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	
				35				40					45	
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50				55					60	
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65				70					75	
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80				85					90	
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95				100					105	
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110				115					120	

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
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ggagtggagc catgagctgc gtctgggtg gtgtcatccc ctggggctg 250
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<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
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 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

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				20					25					30
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly
				35					40					45
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe
				50					55					60
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln
				65					70					75
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu
				80					85					90
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu
				95					100					105
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala
				110					115					120
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Glu	Lys	Lys	Ile	Arg	Thr
				125					130					135
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser
				140					145					150
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met
				155					160					165
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly
				170					175					180
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe
				185					190					195
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr
				200					205					210

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<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

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			20						25					30
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln
				35					40					45
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys
				50					55					60
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His
				65					70					75
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser
				80					85					90
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu
				95					100					105
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys
				110					115					120
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu
				125					130					135
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala
				140					145					150
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys
				155					160					165
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro
				170					175					180
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly
				185					190					195
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr
				200					205					210
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile
				215					220					225
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys
				230					235					240

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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ggcgggaagg cgaggagtgc caccocggca gccacaaggt ccccttcttc 300

aggaacgcga agcaccacac ctgtccttgc ttgcccaacc tgctgtgtct 350

caggttcccg gacggcaggt accgctgtct catggacttg aagaacatca 400

His Thr Cys Pro Cys Leu Pro Asn Leu Leu Cys Ser Arg Phe Pro
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Asp Gly Arg Tyr Arg Cys Ser Met Asp Leu Lys Asn Ile Asn Phe
95 100 105

<210> 372
<211> 1281
<212> DNA
<213> Homo sapiens

<400> 372
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cattgggtgca ggagccctgg gggctgtgct cttggcattg ctgcttgcca 150
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<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373
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 20 25 30
 Leu Ala Asn Thr Asp Val Phe Leu Ser Lys Pro Gln Lys Ala Ala
 35 40 45
 Leu Glu Tyr Leu Glu Asp Ile Asp Leu Lys Thr Leu Glu Lys Glu
 50 55 60
 Pro Arg Thr Phe Lys Ala Lys Glu Leu Trp Glu Lys Asn Gly Ala
 65 70 75
 Val Ile Met Ala Val Arg Arg Pro Gly Cys Phe Leu Cys Arg Glu
 80 85 90
 Glu Ala Ala Asp Leu Ser Ser Leu Lys Ser Met Leu Asp Gln Leu
 95 100 105
 Gly Val Pro Leu Tyr Ala Val Val Lys Glu His Ile Arg Thr Glu
 110 115 120
 Val Lys Asp Phe Gln Pro Tyr Phe Lys Gly Glu Ile Phe Leu Asp
 125 130 135
 Glu Lys Lys Lys Phe Tyr Gly Pro Gln Arg Arg Lys Met Met Phe
 140 145 150
 Met Gly Phe Ile Arg Leu Gly Val Trp Tyr Asn Phe Phe Arg Ala
 155 160 165
 Trp Asn Gly Gly Phe Ser Gly Asn Leu Glu Gly Glu Gly Phe Ile
 170 175 180
 Leu Gly Gly Val Phe Val Val Gly Ser Gly Lys Gln Gly Ile Leu
 185 190 195
 Leu Glu His Arg Glu Lys Glu Phe Gly Asp Lys Val Asn Leu Leu
 200 205 210
 Ser Val Leu Glu Ala Ala Lys Met Ile Lys Pro Gln Thr Leu Ala
 215 220 225
 Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374
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<210> 375
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 375
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 Thr Ser Ala Asn Glu Asn Ser Thr Val Leu Pro Ser Ser Thr Ser 45
 35 40 45
 Ser Ser Ser Asp Gly Asn Leu Arg Pro Glu Ala Ile Thr Ala Ile 60
 50 55 60
 Ile Val Val Phe Ser Leu Leu Ala Ala Leu Leu Leu Ala Val Gly 75
 65 70 75
 Leu Ala Leu Leu Val Arg Lys Leu Arg Glu Lys Arg Gln Thr Glu 90
 80 85 90
 Gly Thr Tyr Arg Pro Ser Ser Glu Glu Gln Phe Ser His Ala Ala 105
 95 100 105
 Glu Ala Arg Ala Pro Gln Asp Ser Lys Glu Thr Val Gln Gly Cys 120
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Leu Pro Ile

<210> 376
 <211> 713
 <212> DNA
 <213> Homo sapiens

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<400> 376
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agaaccacag tcaaccacac caatcatctt tagaagcacg tgtgactcct 250
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tagtattacc ttagtgaat gtatccctgt catatataca ataaggtgaa 450
attataagta cctatgcag ttggctggac agttctaata tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataaattg atacaataa aagaaaagtg tctctctccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
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<210> 377

<212> PRT

<400> 377

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20 25 30

Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45

Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60

Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75

Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378

<212> DNA

<400> 378

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 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt tccaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
 actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
 agaaaggcga atacattcac ttcacccctg acctctact tggaaaaaaa 450
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0950705-1-403

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Thr	Tyr	Leu	Phe	Glu 65	Ala	Thr	Glu	Lys	Arg 70	Phe	Phe	Phe	Lys	Asn 75
Val	Ser	Ile	Leu	Ile 80	Pro	Glu	Asn	Trp	Lys 85	Glu	Asn	Pro	Gln	Tyr 90
Lys	Arg	Pro	Lys	His 95	Glu	Asn	His	Lys	His 100	Ala	Asp	Val	Ile	Val 105
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Phe	Thr	Glu	Cys	Gly 125	Glu	Lys	Gly	Glu	Tyr 130	Ile	His	Phe	Thr	Pro 135
Asp	Leu	Leu	Leu	Gly 140	Lys	Lys	Gln	Asn	Glu 145	Tyr	Gly	Pro	Pro	Gly 150
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Lys	Ile	Glu	Ala	Thr 185	Arg	Cys	Ser	Ala	Gly 190	Ile	Ser	Gly	Arg	Asn 195
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Gln	Ser	Ile	Asp	Ser 245	Val	Val	Glu	Phe	Cys 250	Asn	Glu	Lys	Thr	His 255
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Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

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Ile Pro Met Val Thr	Pro Pro Pro Pro	Pro Val Phe Ser Leu Leu			
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Lys Ile Ser Gln Arg	Ile Val Cys Leu	Val Leu Asp Lys Ser Gly			
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Ser Met Gly Gly Lys	Asp Arg Leu Asn	Arg Met Asn Gln Ala Ala			
	320		325		330
Lys His Phe Leu Leu	Gln Thr Val Glu	Asn Gly Ser Trp Val Gly			
	335		340		345
Met Val His Phe Asp	Ser Thr Ala Thr	Ile Val Asn Lys Leu Ile			
	350		355		360
Gln Ile Lys Ser Ser	Asp Glu Arg Asn	Thr Leu Met Ala Gly Leu			
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Pro Thr Tyr Pro Leu	Gly Gly Thr Ser	Ile Cys Ser Gly Ile Lys			
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Tyr Ala Phe Gln Val	Ile Gly Glu Leu His	Ser Gln Leu Asp Gly			
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Ser Glu Val Leu Leu	Leu Thr Asp Gly	Glu Asp Asn Thr Ala Ser			
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Ser Cys Ile Asp Glu	Val Lys Gln Ser	Gly Ala Ile Val His Phe			
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Lys Ile Thr Gly Gly	Ser His Phe Tyr	Val Ser Asp Glu Ala Gln			
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Thr Asp Leu Ser Gln	Lys Ser Leu Gln	Leu Glu Ser Lys Gly Leu			
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Thr Leu Asn Ser Asn	Ala Trp Met Asn	Asp Thr Val Ile Ile Asp			
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Ser Thr Val Gly Lys	Asp Thr Phe Phe	Leu Ile Thr Trp Asn Ser			
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Leu Pro Pro Ser Ile	Ser Leu Trp Asp	Pro Ser Gly Thr Ile Met			
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Glu Asn Phe Thr Val	Asp Ala Thr Ser	Lys Met Ala Tyr Leu Ser			
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Ile Pro Gly Thr Ala	Lys Val Gly Thr	Trp Ala Tyr Asn Leu Gln			
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Ala Ala Asn Ser Ser	Val Pro Pro Ile	Thr Val Asn Ala Lys Met			

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Tyr Ser Arg Tyr	Phe Thr Ala Tyr Thr	Glu Asn Gly Arg Tyr	Ser		
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Leu Lys Val Arg	Ala His Gly Gly Ala	Thr Ala Arg Leu	Lys		
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Leu Arg Pro Pro	Leu Asn Arg Ala Ala	Tyr Ile Pro Gly Trp	Val		
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Val Asn Gly Glu	Ile Glu Ala Asn Pro	Pro Arg Pro Glu Ile	Asp		
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Glu Asp Thr Gln	Thr Thr Leu Glu Asp	Phe Ser Arg Thr Ala	Ser		
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Gly Gly Ala Phe	Val Val Ser Gln Val	Pro Ser Leu Pro Leu	Pro		
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Asp Gln Tyr Pro	Pro Ser Gln Ile Thr	Asp Leu Asp Ala Thr	Val		
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Phe Asp Val Gly	Lys Val Gln Arg Tyr	Ile Ile Arg Ile Ser	Ala		
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Ser Ile Leu Asp	Leu Arg Asp Ser Phe	Asp Asp Ala Leu Gln	Val		
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Asn Thr Thr Asp	Leu Ser Pro Lys Glu	Ala Asn Ser Lys Glu	Ser		
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Thr Pro Asp Lys	Ser His Asn Ser Gly	Val Asn Ile Ser Thr	Leu		
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<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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 <212> PRT
 <213> Homo sapiens

<400> 381
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 35 40 45
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val
 50 55 60
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu
 65 70 75
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser
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Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	95	100	105
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Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	125	130	135
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	140	145	150
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	155	160	165
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	170	175	180
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	185	190	195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	200	205	210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	215	220	225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	230	235	240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	245	250	255
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	260	265	270
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	275	280	285
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	290	295	300
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	305	310	315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	320	325	330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	335	340	345
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	350	355	360
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	365	370	375
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	380	385	390
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<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

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<210> 386

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<212> DNA

<213> Homo sapiens

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<212> PRT
<213> Homo sapiens

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35 40 45
Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
50 55 60
Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
65 70 75
Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
80 85 90
Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
95 100 105
Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
110 115 120
Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
125 130 135
Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
140 145 150
Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
155 160 165
Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
170 175 180
Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
185 190 195
Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
200 205 210

Pro Ser

<210> 388
<211> 1371
<212> DNA
<213> Homo sapiens

<400> 388
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ggcccttggca ggggtgttga gccctcggtc tgcccctgcc ggtctctggg 100
 gccaaggctg ggtttccctc atgtatggca agagctctac tcgtcgcggtg 150
 cttcttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggtg tgctgggagc tgtaaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttctgccc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacctat gagtgggctg ttaaggacc 400
 ggggtgtctg ggtatgggaat cctgagcggt acgatgctc catcctctc 450
 tggaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatggg tgatagggga gatccggctc agcgtctgctc 550
 aactgtacg cttctctgag atccacttcc tggctctggc cattggctct 600
 gccctgtcac tgatgatcat aatagtaatt gtatgggtcc tcttccagca 650
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 gaacaagaac cctagtattt ctggaagtta atggaaactt ttcttggct 850
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 agacaagcaa caccctctg gagccagcac agtgcctc catatcacca 950
 gtcatacaca gccctattat taaggtctta tttaatttca gagtgtaaat 1000
 ttttcaagt gctcattagg ttttataaac aagaagctac attttggccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattggtatc 1100
 aaaggggata aaagccaatt tgtctgttac atttccttcc acgtatttct 1150
 tttagcagca cttctgtcac taaagttaat gtgttactc tcttccctc 1200
 ccacattctc aattaaaagg tgagctaagg ctctcggtg tttctgatta 1250
 acagtaaatc ctaaattcaa actgttaaat gacattttta ttttatgtc 1300
 tctcttaac tatgagacac atcttgtttt actgaatttc tttcaatatt 1350
 ccaggtgata gatttttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

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				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctgaggcca gaggc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gaggc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
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 agcagtcctg gtactcttgg gagtttccat cttctcgtc tctgccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctcgtct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccactgogac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgt 250
 aagacattcc agttttaccc aaatggggtg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatcagt ttattttctt tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

069056 = 1143

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgactctg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccagg aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

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 ccggcctgcc tcagcggccc ccatgggcgg ccagaaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacgggtgtg acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggt gccaggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggcacctgtg caggaggagg ctgcctgttc actgggatca 700
 gccaggggcg cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagcccatc tggggagggg tggaggaagg 800
 acatgtaccc ttctatgcct acacaccctt cattaaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Pro Val Pro Ala Leu Cys Leu Leu Trp Ala Leu Ala Met Val
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 Thr Arg Pro Ala Ser Ala Ala Pro Met Gly Gly Pro Glu Leu Ala
 20 25 30
 Gln His Glu Glu Leu Thr Leu Leu Phe His Gly Thr Leu Gln Leu
 35 40 45
 Gly Gln Ala Leu Asn Gly Val Tyr Arg Thr Thr Glu Gly Arg Leu
 50 55 60
 Thr Lys Ala Arg Asn Ser Leu Gly Leu Tyr Gly Arg Thr Ile Glu
 65 70 75
 Leu Leu Gly Gln Glu Val Ser Arg Gly Arg Asp Ala Ala Gln Glu
 80 85 90
 Leu Arg Ala Ser Leu Leu Glu Thr Gln Met Glu Glu Asp Ile Leu
 95 100 105
 Gln Leu Gln Ala Glu Ala Thr Ala Glu Val Leu Gly Glu Val Ala
 110 115 120
 Gln Ala Gln Lys Val Leu Arg Asp Ser Val Gln Arg Leu Glu Val
 125 130 135
 Gln Leu Arg Ser Ala Trp Leu Gly Pro Ala Tyr Arg Glu Phe Glu
 140 145 150
 Val Leu Lys Ala His Ala Asp Lys Gln Ser His Ile Leu Trp Ala
 155 160 165
 Leu Thr Gly His Val Gln Arg Gln Arg Arg Glu Met Val Ala Gln
 170 175 180
 Gln His Arg Leu Arg Gln Ile Gln Glu Arg Leu His Thr Ala Ala

Leu Pro Ala

<210> 402
 <211> 1915
 <212> DNA
 <213> Homo sapiens

<400> 402
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 tgtaatttgc atcctgggtga tcaccttact cctggaccag accaccagcc 100
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 aaggatggag atctgaagac tcaaatgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
 aagttcaca gaaatgctac ctgtcttcag aaggtttgaa goatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt cacggaagcg 450
 aagtttgttg acgtcaacgg aatcgctatc tccttcctca actgggacgg 500
 tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtgaggat gatgaggcct gtgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggto tttctccaat gtgtcctcca 650
 agcaagattc atcataactt ataggttcat gatctetaag atcaagtaaa 700
 aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc ttgggattt 800
 tgcccttctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttct 900
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 tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
 ttggaagttt ccagccgcaa tttgaaatga aatgacaagg tgttatattg 1300

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 aaaagaacct acattttatt tgcttttagca tccttactct caccttttat 1450
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 gtcgtgtgcaa ttttttatc tgcctagtgc tattctgctt gtttaactag 1650
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 cttcaaataa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt tttagctggtt 1850
 tcattgtctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403
 <211> 206
 <212> PRT
 <213> Homo sapiens

<400> 403
 Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
 1 5 10 15
 Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
 20 25 30
 Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
 35 40 45
 Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
 50 55 60
 Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
 65 70 75
 Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
 80 85 90
 Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
 95 100 105
 Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
 110 115 120
 Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
 125 130 135
 Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
 140 145 150
 Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg

	155		160		165								
Ala	Gln	Pro	Asn	Gly	Lys	Arg	Glu	Asn	Cys	Val	Leu	Phe	Ser
			170					175					180
Gln	Ser	Ala	Gln	Gly	Lys	Trp	Ser	Asp	Glu	Ala	Cys	Arg	Ser
			185						190				195
Lys	Arg	Tyr	Ile	Cys	Glu	Phe	Thr	Ile	Pro	Lys			
			200						205				

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
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<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttctctgc tgcgacaggc etc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggtgta aaaggagcct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
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 ttccccgcgc gcccgcagcc cccgcgcacat gaagctcgcc gccctcctgg 100
 ggctctcgct gggcctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gcctgtcgct gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaacccctc cggcaccctc aaccgcgtga 250
 agctcctgct gagcagcctg ggcacccccg tgaaccacct catagagggc 300
 tccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccaccgc cgagggtga 450
 aaaccccgcc gcggggagga ccgatccatcc ccttccccgc gccctctca 500
 ataaactgtg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 408
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 Ser Ser Ala Ala Ala Phe Leu Val Gly Ser Ala Lys Pro Val Ala
 20 25 30
 Gln Pro Val Ala Ala Leu Glu Ser Ala Ala Glu Ala Gly Ala Gly
 35 40 45
 Thr Leu Ala Asn Pro Leu Gly Thr Leu Asn Pro Leu Lys Leu Leu
 50 55 60
 Leu Ser Ser Leu Gly Ile Pro Val Asn His Leu Ile Glu Gly Ser
 65 70 75
 Gln Lys Cys Val Ala Glu Leu Gly Pro Gln Ala Val Gly Ala Val
 80 85 90
 Lys Ala Leu Lys Ala Leu Leu Gly Ala Leu Thr Val Phe Gly
 95 100

<210> 409
 <211> 2089
 <212> DNA
 <213> Homo sapiens

<400> 409
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 aaggaggcca ctctctggcc tccgcagccg atcacatgaa ggtggtgcca 100
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 ggcctccagt cctcagtcgc cagagacccc agccctcag aaccagacca 200
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ctggaactgg	gcctctcaca	ggggagtttt	gccttcaccc	acaaggattt	600
tgatgtcaaa	gagactttct	tcaattttatc	caagagggtat	tttgatacac	650
agtgcgtgcc	tatgaatttt	cgcaatgcct	cacaggccaa	aaggctcatg	700
aatcattaca	ttaacaaaga	gactcggggg	aaaattccca	aactgtttga	750
tgagattaat	cctgaaaacca	aattaattct	tgtggattac	atcttgtttca	800
aagggaaatg	gttgacccca	tttgaccctg	ttctaccga	agtcgacact	850
ttccacctgg	acaagtacaa	gaccattaag	gtgcccatga	tgtacgggtc	900
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aactgcctca	ccaaggaaat	gccaccatgc	tgggtggtct	catggagaaa	1000
atgggtgacc	acctgcacct	tgaagactac	ctgaccacag	acttggtgga	1050
gacatggctc	agaaacatga	aaaccagaaa	catggaagtt	ttctttccga	1100
agttcaagct	agatcagaag	tatgagatgc	atgagctgct	taggcagatg	1150
ggaatcagaa	gaatctttct	accttttgct	gaccttagtg	aactctcagc	1200
tactggaaga	aatctccaag	tatccagggt	tttacgaaga	acagtgattg	1250
aagttgatga	aaggggcact	gaggcagtg	caggaaatct	gtcagaaaat	1300
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tgaatccgac	tctcctataa	ttcaggacat	gcataagcac	ttcgtgctgt	1450
agtagatgct	gaatctgagg	tatcaaacac	acacaggata	ccagcaattg	1500
atggcagggg	agagtgttcc	ttttgttctt	aactagttta	gggtgttctc	1550
aaataaatac	agtagtcccc	acttatctga	gggggatata	ttcaaaagacc	1600
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ttcctacaca	tacataccta	tgataaagtt	taatttataa	attaggcaca	1700
gtaagagatt	aacaataata	acaacattaa	gtaaaatgag	ttacttgaac	1750
gcaagcactg	caataccata	acagtcacaac	tgattataga	gaaggctact	1800
aagtgaacta	tgggcgagga	gcatagacag	tgtggagaca	ttgggcaagg	1850
ggagaattca	catcctgggt	gggacagagc	aggacgatgc	aagattccat	1900
cccactactc	agaatggcat	gctgcttaag	acttttagat	tgttttattc	1950
tggaattttt	cattttaatgt	ttttggacca	tggttgacca	tggttaactg	2000
agactgcaga	aagcaaaaacc	atggataaag	gaggactact	acaaaagcat	2050
taaatgtata	catatttttt	aaaaaaaaaa	aaaaaaaaaa	2089	

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410
 Met Lys Val Val Pro Ser Leu Leu Leu Ser Val Leu Leu Ala Gln
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 Val Trp Leu Val Pro Gly Leu Ala Pro Ser Pro Gln Ser Pro Glu
 20 25 30
 Thr Pro Ala Pro Gln Asn Gln Thr Ser Arg Val Val Gln Ala Pro
 35 40 45
 Arg Glu Glu Glu Glu Asp Glu Gln Glu Ala Ser Glu Glu Lys Ala
 50 55 60
 Gly Glu Glu Glu Lys Ala Trp Leu Met Ala Ser Arg Gln Gln Leu
 65 70 75
 Ala Lys Glu Thr Ser Asn Phe Gly Phe Ser Leu Leu Arg Lys Ile
 80 85 90
 Ser Met Arg His Asp Gly Asn Met Val Phe Ser Pro Phe Gly Met
 95 100 105
 Ser Leu Ala Met Thr Gly Leu Met Leu Gly Ala Thr Gly Pro Thr
 110 115 120
 Glu Thr Gln Ile Lys Arg Gly Leu His Leu Gln Ala Leu Lys Pro
 125 130 135
 Thr Lys Pro Gly Leu Leu Pro Ser Leu Phe Lys Gly Leu Arg Glu
 140 145 150
 Thr Leu Ser Arg Asn Leu Glu Leu Gly Leu Ser Gln Gly Ser Phe
 155 160 165
 Ala Phe Ile His Lys Asp Phe Asp Val Lys Glu Thr Phe Phe Asn
 170 175 180
 Leu Ser Lys Arg Tyr Phe Asp Thr Glu Cys Val Pro Met Asn Phe
 185 190 195
 Arg Asn Ala Ser Gln Ala Lys Arg Leu Met Asn His Tyr Ile Asn
 200 205 210
 Lys Glu Thr Arg Gly Lys Ile Pro Lys Leu Phe Asp Glu Ile Asn
 215 220 225
 Pro Glu Thr Lys Leu Ile Leu Val Asp Tyr Ile Leu Phe Lys Gly
 230 235 240
 Lys Trp Leu Thr Pro Phe Asp Pro Val Phe Thr Glu Val Asp Thr
 245 250 255
 Phe His Leu Asp Lys Tyr Lys Thr Ile Lys Val Pro Met Met Tyr
 260 265 270
 Gly Ala Gly Lys Phe Ala Ser Thr Phe Asp Lys Asn Phe Arg Cys
 275 280 285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411

<211> 636

<212> DNA

<213> Homo sapiens

<400> 411

ctgggatcag ccaactgcag tccctgagca ctctctacag agacgcggac 50
 cccagacatg aggaggctcc tccctggcac cagcctgggtg gttgtgctgc 100
 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccttcaga gcaggaccca gagaaggcct ggggcgcccc 200
 tgtgtgtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
 tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
 aggggcccca tcttccagg caccaaggcc tggatggaga ccgaggacac 350
 cctgggcctg gtccctgagtc ccgagcccca ccatgacagc ctgtaccacc 400
 ctccgcctga ggaggaccag ggcgaggaga gggcccgggt gtgggtgatg 450
 ccaaatacacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca gggcccatca ctgccccgcg cctgtcccaa 550
 ggccaggcgt gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaaccccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
1				5					10					15
Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
			20						25					30
Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
			35						40					45
Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
			50						55					60
Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
			65						70					75
Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
			80						85					90
Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
			95						100					105
Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
			110						115					120
Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
			125						130					135
Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
			140						145					150
Gln														

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50
aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100
caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150
tggagtacag atgaggctaa tactttacttc aaggaatgga cctgtttctc 200
gtctocatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250
gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300
cagaccttct gtgacatgac ctctgggggt ggcggctgga ccttggtggc 350
cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ccacaatagt tcaagtacat ctgctgcttc atcagtaaca atcacacaaa 550
ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
gttggtggta ttgtattaac gctgggaggt ttatctattc ttatcatgg 650
atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
aacatgatgc catcatttaa ggaatccat ggaccaagga tggaatacag 750
attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800
tattctcttt ttgaaaatag tataaacagg ccatgcataat aatgtacagt 850
gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
tgaaaataac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
gtttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggggtgg 1000
ggcattggtc acatagacc agtaattgaa agacgtcatc actgaaagac 1050
agaatgccat ctgggcatac aaataagaag ttgtcacag cactcaggat 1100
tttgggtatc tttttagct cacataaga acttcagtgc ttttcagagc 1150
tggatatatc ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
gatctgaagc ataatttaag aaaacatca acattttttg tgctttaaac 1250
tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416
<211> 208
<212> PRT
<213> Homo sapiens

<400> 416
Met Gly Leu Gly Ala Arg Gly Ala Trp Ala Ala Leu Leu Leu Gly
1 5 10 15
Thr Leu Gln Val Leu Ala Leu Leu Gly Ala Ala His Glu Ser Ala
20 25 30
Ala Met Ala Ala Ser Ala Asn Ile Glu Asn Ser Gly Leu Pro His
35 40 45
Asn Ser Ser Ala Asn Ser Thr Glu Thr Leu Gln His Val Pro Ser
50 55 60
Asp His Thr Asn Glu Thr Ser Asn Ser Thr Val Lys Pro Pro Thr
65 70 75
Ser Val Ala Ser Asp Ser Ser Asn Thr Thr Val Thr Thr Met Lys
80 85 90
Pro Thr Ala Ala Ser Asn Thr Thr Thr Pro Gly Met Val Ser Thr
95 100 105
Asn Met Thr Ser Thr Thr Leu Lys Ser Thr Pro Lys Thr Thr Ser
110 115 120
Val Ser Gln Asn Thr Ser Gln Ile Ser Thr Ser Thr Met Thr Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagccoga 50

gcggggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100

gcgatggcga cctgtgtggg aggccttctt cggtcttggt ccttgctcag 150

cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200

ccgccaagaa ttctgaggat gtcagatgta aatgtatctg ccotccctat 250

aaagaaaatt ctgggcataa ttataataag aacatatctc agaaagattg 300

tgattgcctt catgtttgtg agcccatgcc tgtgcggggg cctgatgtag 350

aagcatactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400

acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450

tctgtacatg gtatatctta ctctggttga gccatactg aagaggcgcc 500

tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550

cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtogagc 600

caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

tccaagagca gcgaaagtct gtctttgacc ggcagtgtgt cctcagctaa 700

ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750

agaaactgact gggttttgct gggtttcatt ttaatacctt gttgatattca 800

ccaactgttg ctggaagatt caaaaactgga agcaaaaaact tgcgttgattt 850

ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900

aaagtcagcc aataagtcct ttccattttg tgacttttac taataaaaaa 950

aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
 ttgtgtgttg ttgttttttg ttgtttgttt ttgggtgggag aggggagggg 1100
 tgccctgggaa gtggttaaca acttttttca agtcacttta ctaaacaac 1150
 ttttgaataa agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctggtggct ttccacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atcctagaac aaactggcca ttgctagtgt 1400
 tactctaaag actaaacata gtcttgggtg gtgtggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaaacg ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggctgg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattatttg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 418
 Met Ala Thr Leu Trp Gly Gly Leu Leu Arg Leu Gly Ser Leu Leu
 1 5 10 15
 Ser Leu Ser Cys Leu Ala Leu Ser Val Leu Leu Leu Ala Gln Leu
 20 25 30
 Ser Asp Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile
 35 40 45
 Cys Pro Pro Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn
 50 55 60
 Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val Val Glu Pro Met
 65 70 75
 Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu
 80 85 90
 Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val Thr Ile
 95 100 105
 Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Tyr Met Val
 110 115 120
 Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
 140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
 155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
 170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
 185 190 195

Val Leu Ser

<210> 419
 <211> 681
 <212> DNA
 <213> Homo sapiens

<400> 419
 gcacctgcga ccaccgtgag cagtcatggc gtactccaca gtgcagagag 50
 tcgctctggc ttctgggctt gtcctggctc tgcgctgct gctgcccaag 100
 gccttctctgt cccgcgggaa gcggcaggag ccgccgccga cacctgaag 150
 aaaattgggc cgatttccac ctatgatgca tcatcaccag gcacctctag 200
 atggccagac tcctggggct cgtttccaga ggtctcacct tgccagggca 250
 tttgcaaagg ccaaaggatc aggtggaggt gctggaggag gaggtatgg 300
 aagaggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
 tatatatact gtacattcta ttttaagtaa gtagaatcat cctaataata 400
 ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
 aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
 ctgcctcttc ttcatgaggt acttaggata gccattattt cagtttcaca 550
 taagaatggt tactcaatgt ttaagtgtt tgccccaaaa ttcacaacta 600
 acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
 gagtgataca attcaatgca ctcccctgcc a 681

<210> 420
 <211> 128
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
 1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
 20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
 35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421
<211> 1630
<212> DNA
<213> Homo sapiens

<400> 421
cggtcgcgagt gcagctgtggt ggagatttca gtgcattgcc tcccctgggt 50
gctcttcacg ttggtattga aagttgagag cagcatgttt tgcccactga 100
aaactcaccct gctgccagtgt ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggaactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtggt gcctattggg cgcttcacga accgcgtaca 350
cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcgggtgta ctgcatgtgc ttccagagga 500
gccccaaagag ctcatgggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtgt aaacacgtga ccaaggtaga atggatatatt 600
tcaggacggc gcgcaaagga ggagattgta ttctgttact accacaaact 650
caggatgtct gtggagtact ccagagactg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttcgcgaatg acggttccat catgcttcaa 750
ggagtggagg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
ctcgaacact ggtgaccccc gcagccctga ggctctggtg ctgggtggtg 900
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tctctgctgt 950
ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagatgtcag 1000

tgaattctac agtcttggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaagatgt gaaggggaga aacacattta 1100
 ctccccata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
 aatcagaggc cactacatg accatgcacc cagtttgccc ttctctgagg 1200
 tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
 ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgtattc 1350
 agactcccg cctccagct gtctcctctg ctcatgtttt ggtcaatata 1400
 ctgaagatgg agaatttgga gcctggcaga gagactggac agctctggag 1450
 gaacagcgct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
 aacttggccc tgggaaccag gctgagctga gtggcctcaa accccccgtt 1550
 ggatcagacc ctctgtgtgg cagggttctt agtggatgag ttactgggaa 1600
 gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422
 <211> 394
 <212> PRT
 <213> Homo sapiens

<400> 422
 Met Phe Cys Pro Leu Lys Leu Ile Leu Leu Pro Val Leu Leu Asp
 1 5 10 15
 Tyr Ser Leu Gly Leu Asn Asp Leu Asn Val Ser Pro Pro Glu Leu
 20 25 30
 Thr Val His Val Gly Asp Ser Ala Leu Met Gly Cys Val Phe Gln
 35 40 45
 Ser Thr Glu Asp Lys Cys Ile Phe Lys Ile Asp Trp Thr Leu Ser
 50 55 60
 Pro Gly Glu His Ala Lys Asp Glu Tyr Val Leu Tyr Tyr Tyr Ser
 65 70 75
 Asn Leu Ser Val Pro Ile Gly Arg Phe Gln Asn Arg Val His Leu
 80 85 90
 Met Gly Asp Ile Leu Cys Asn Asp Gly Ser Leu Leu Leu Gln Asp
 95 100 105
 Val Gln Glu Ala Asp Gln Gly Thr Tyr Ile Cys Glu Ile Arg Leu
 110 115 120
 Lys Gly Glu Ser Gln Val Phe Lys Lys Ala Val Val Leu His Val
 125 130 135
 Leu Pro Glu Glu Pro Lys Glu Leu Met Val His Val Gly Gly Leu
 140 145 150
 Ile Gln Met Gly Cys Val Phe Gln Ser Thr Glu Val Lys His Val

	155		160		165
Thr Lys Val Glu Trp	Ile Phe Ser Gly	Arg Arg Ala Lys Glu Glu			
	170		175		180
Ile Val Phe Arg Tyr	Tyr His Lys Leu Arg	Met Ser Val Glu Tyr			
	185		190		195
Ser Gln Ser Trp Gly	His Phe Gln Asn Arg	Val Asn Leu Val Gly			
	200		205		210
Asp Ile Phe Arg Asn	Asp Gly Ser Ile Met	Leu Gln Gly Val Arg			
	215		220		225
Glu Ser Asp Gly Gly	Asn Tyr Thr Cys Ser	Ile His Leu Gly Asn			
	230		235		240
Leu Val Phe Lys Lys	Thr Ile Val Leu His	Val Ser Pro Glu Glu			
	245		250		255
Pro Arg Thr Leu Val	Thr Pro Ala Ala Leu	Arg Pro Leu Val Leu			
	260		265		270
Gly Gly Asn Gln Leu	Val Ile Ile Val Gly	Ile Val Cys Ala Thr			
	275		280		285
Ile Leu Leu Leu Pro	Val Leu Ile Leu Ile	Val Lys Lys Thr Cys			
	290		295		300
Gly Asn Lys Ser Ser	Val Asn Ser Thr Val	Leu Val Lys Asn Thr			
	305		310		315
Lys Lys Thr Asn Pro	Glu Ile Lys Glu Lys	Pro Cys His Phe Glu			
	320		325		330
Arg Cys Glu Gly Glu	Lys His Ile Tyr Ser	Pro Ile Ile Val Arg			
	335		340		345
Glu Val Ile Glu Glu	Glu Glu Pro Ser Glu	Lys Ser Glu Ala Thr			
	350		355		360
Tyr Met Thr Met His	Pro Val Trp Pro Ser	Leu Arg Ser Asp Arg			
	365		370		375
Asn Asn Ser Leu Glu	Lys Lys Ser Gly Gly	Gly Met Pro Lys Thr			
	380		385		390
Gln Gln Ala Phe					

<210> 423
 <211> 963
 <212> DNA
 <213> Homo sapiens

<400> 423
 ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
 ccattctaca tgggtctacc ctactaaaga caggaagatc ataaactgac 100
 agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
 ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcaccc cctcctggcg gcgtgtgatg gctttgatgc tgctgaccc 300
 gtgcgtgggg atggtgtcgc ggctgtgggc tctggggatt tggctctgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatogcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggto ataatgcag ccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggacaaa cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtoga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatag aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaa aaa 963

<210> 424
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 424
 Met Gln Asp Glu Asp Gly Tyr Ile Thr Leu Asn Ile Lys Thr Arg
 1 5 10 15
 Lys Pro Ala Leu Val Ser Val Gly Pro Ala Ser Ser Ser Trp Trp
 20 25 30
 Arg Val Met Ala Leu Ile Leu Leu Ile Leu Cys Val Gly Met Val
 35 40 45
 Val Gly Leu Val Ala Leu Gly Ile Trp Ser Val Met Gln Arg Asn
 50 55 60
 Tyr Leu Gln Asp Glu Asn Glu Asn Arg Thr Gly Thr Leu Gln Gln
 65 70 75
 Leu Ala Lys Arg Phe Cys Gln Tyr Val Val Lys Gln Ser Glu Leu
 80 85 90
 Lys Gly Thr Phe Lys Gly His Lys Cys Ser Pro Cys Asp Thr Asn
 95 100 105
 Trp Arg Tyr Tyr Gly Asp Ser Cys Tyr Gly Phe Phe Arg His Asn
 110 115 120
 Leu Thr Trp Glu Glu Ser Lys Gln Tyr Cys Thr Asp Met Asn Ala

	125		130		135									
Thr	Leu	Leu	Lys	Ile	Asp	Asn	Arg	Asn	Ile	Val	Glu	Tyr	Ile	Lys
	140								145					150
Ala	Arg	Thr	His	Leu	Ile	Arg	Trp	Val	Gly	Leu	Ser	Arg	Gln	Lys
	155								160					165
Ser	Asn	Glu	Val	Trp	Lys	Trp	Glu	Asp	Gly	Ser	Val	Ile	Ser	Glu
	170								175					180
Asn	Met	Phe	Glu	Phe	Leu	Glu	Asp	Gly	Lys	Gly	Asn	Met	Asn	Cys
	185								190					195
Ala	Tyr	Phe	His	Asn	Gly	Lys	Met	His	Pro	Thr	Phe	Cys	Glu	Asn
	200								205					210
Lys	His	Tyr	Leu	Met	Cys	Glu	Arg	Lys	Ala	Gly	Met	Thr	Lys	Val
	215								220					225
Asp	Gln	Leu	Pro											

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc toccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg totgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgccctc cctgccca 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 432
 cagtgcacac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 437
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<210> 463
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<210> 464
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<220>
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<400> 464
gtgctgcccc caattcatga 20

<210> 465
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<220>
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<400> 465
gtccttggtga tgggtctgaa ttatat 26

<210> 466
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<400> 466
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<210> 467
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<400> 467
ctgaggaacc agccatgtct ct 22

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<220>
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<400> 468
gaccagatgc aggtacagga tga 23

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<400> 470
gggtggaggc tcaactgagta ga 22

<210> 471
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<400> 471
caatacagggt aatgaaactc tgcttctt 28

<210> 472
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<212> DNA
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<220>
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<400> 472
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<220>
<223> Synthetic oligonucleotide probe

<400> 473
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<210> 474
<211> 20
<212> DNA
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<220>
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<400> 475
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<210> 476
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<400> 476
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<210> 478
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<400> 478
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<210> 479
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<220>
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<400> 479
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<210> 480
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 <400> 481
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 <210> 482
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 <400> 482
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 <400> 483
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 <210> 484
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<400> 486
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<210> 488
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<400> 488
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<400> 489
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<400> 490
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 cagcccgcgc gggagccgga ccgccgcgg aggagctcgg acggcatgct 150
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 gaggagaagg aggaggagcg gaaccagag aggggcagca aaagaagcgg 300
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 aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
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 aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
 caacgtagcc agtgagggca aaagaagggc tctgtaacag aacottacct 1100
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 <211> 245
 <212> PRT
 <213> Homo Sapien

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 Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
 35 40 45
 Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
 50 55 60
 Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
 65 70 75
 Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
 80 85 90
 Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
 95 100 105
 Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
 110 115 120
 Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
 125 130 135
 Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
 140 145 150
 Tyr Tyr Val Thr Tyr Ser Ser Met Ile Tyr Arg Gln Gln Gln Ser
 155 160 165
 Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
 170 175 180
 Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
 185 190 195
 Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
 200 205 210
 Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

	215		220		225
Ser Arg Ser Val	Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser				
	230		235		240
His Asn Glu Ser Thr					
	245				

<210> 496
 <211> 1471
 <212> DNA
 <213> Homo Sapien

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 gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatat 150
 tggggggatt tcagtgaata aagtggggga tccctccat ttagagtgt 200
 gcaaaagaaa aaacaccaag gttgggttcc ttcctgacat tggcagtgc 250
 ccagtagggg tgggatgagc gaatatcc aaagctaaag tccacaccc 300
 tgtagattac aagagtggat ttggcaggag tgtgcccac aatacagtgg 350
 aaaggtgcct gaagatat 500
 aaaccacgtc ttggaatatt agtgggtctt 400
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaagg 450
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 aaggcagctg cccactttct gcccaagctc ctggaggtgg ccatgtacca 1350
 ggagccttct ctccacagtg tccccagggc ccccccttcc agtccccctg 1400
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<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

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			20						25					30
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
			35						40					45
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro
			50						55					60
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
			65						70					75
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
			80						85					90
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
			95						100					105
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
			110						115					120
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
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Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
			140						145					150
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
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Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
			170						175					180
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
			185						190					195
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
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Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
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gtgcgcattct tggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200
gctcaagggt atagtaccca ggttatattg caggcaaggc tactacttgc 250
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gggagtgaac acagggttgt atatagccat gaatggagaa ggttacotct 400
accatcaga actttttacc cctgaatgca agtttaaga atctgttttt 450
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggttagagc tggtttttgg gattaaataa ggaagggcaa gctatgaaa 550
ggaacagagt aaagaaaacc aaaccagcag ctcatcttct acccaagcca 600
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<213> Homo Sapien

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35 40
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60
50 55
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75
65 70
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90
80 85
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105
95 100
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120
110 115

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
125 130 135

Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
140 145 150

Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
155 160 165

Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
170 175 180

Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
185 190 195

Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
200 205 210

Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
215 220 225

Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
230 235 240

Val Asn Lys Ser Lys Thr Thr
245

<210> 500

<211> 2906

<212> DNA

<213> Homo Sapien

<400> 500

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tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150

gaagcttttt ctgttgagcc ctggatctta acacaaatgt gtatatgtgc 200

acacagggag cattcaagaa tgaataaac cagagttaga cccgcggggg 250

ttggtgtgtt ctgacataaa taaataatct taaagcagct gttccctccc 300

ccaccoccaa aaaaaaggat gattggaat gaagaaccga ggattcacaa 350

agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400

gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaagaact 450

ggtgtgtgtg tgttttcctt tctttttgaa ttcccacaa gaggagagga 500

aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcy 550

gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600

tttgtgcta tgttgactaa aattgaogga taattgcagt tggatttttc 650

ttcatcaacc tctttttttt taaattttta ttctttttgg tatcaagatc 700

atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaatacaaa ctgtttgaat tccagaagga ccaacaccag 800
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 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
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 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr	Ala	Phe	Asn	Arg 170	Ile	Pro	Ser	Leu	Arg 175	Arg	Leu	Asp	Leu	Gly 180
Glu	Leu	Lys	Arg	Leu 185	Ser	Tyr	Ile	Ser	Glu 190	Gly	Ala	Phe	Glu	Gly 195
Leu	Ser	Asn	Leu	Arg 200	Tyr	Leu	Asn	Leu	Ala 205	Met	Cys	Asn	Leu	Arg 210
Glu	Ile	Pro	Asn	Leu 215	Thr	Pro	Leu	Ile	Lys 220	Leu	Asp	Glu	Leu	Asp 225
Leu	Ser	Gly	Asn	His 230	Leu	Ser	Ala	Ile	Arg 235	Pro	Gly	Ser	Phe	Gln 240
Gly	Leu	Met	His	Leu 245	Gln	Lys	Leu	Trp	Met 250	Ile	Gln	Ser	Gln	Ile 255
Gln	Val	Ile	Glu	Arg 260	Asn	Ala	Phe	Asp	Asn 265	Leu	Gln	Ser	Leu	Val 270
Glu	Ile	Asn	Leu	Ala 275	His	Asn	Asn	Leu	Thr 280	Leu	Leu	Pro	His	Asp 285
Leu	Phe	Thr	Pro	Leu 290	His	His	Leu	Glu	Arg 295	Ile	His	Leu	His	His 300
Asn	Pro	Trp	Asn	Cys 305	Asn	Cys	Asp	Ile	Leu 310	Trp	Leu	Ser	Trp	Trp 315
Ile	Lys	Asp	Met	Ala 320	Pro	Ser	Asn	Thr	Ala 325	Cys	Cys	Ala	Arg	Cys 330
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Thr	Gly	Met	Tyr	Thr 425	Cys	Met	Val	Ser	Asn 430	Ser	Val	Gly	Asn	Thr 435
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Phe	Ser	Tyr	Phe	Ser 455	Thr	Val	Thr	Val	Glu 460	Thr	Met	Glu	Pro	Ser 465
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Gln Ser Thr Arg Ser Thr Glu Lys Thr Phe Thr Ile Pro Val Thr
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Asp Ile Asn Ser Gly Ile Pro Gly Ile Asp Glu Val Met Lys Thr
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Thr Lys Ile Ile Ile Gly Cys Phe Val Ala Ile Thr Leu Met Ala
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Ala Val Met Leu Val Ile Phe Tyr Lys Met Arg Lys Gln His His
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Arg Gln Asn His His Ala Pro Thr Arg Thr Val Glu Ile Ile Asn
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575 580 585

Pro Met Pro Ala Ile Glu His Glu His Leu Asn His Tyr Asn Ser
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Tyr Lys Ser Pro Phe Asn His Thr Thr Thr Val Asn Thr Ile Asn
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<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

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<211> 373

<212> PRT

<213> Homo Sapien

<400> 503

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Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Asp
			35						40				45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asn	Glu	Gly	Asn	Gln
			50						55				60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Leu
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Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe
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Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Asp
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Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Val
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Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys
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Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu
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Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr
			155						160				165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu
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Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu
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Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Ala
			200						205				210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Val
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Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly
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 Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro
 260 265 270
 Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val
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 Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly
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 Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln
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 Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr
 320 325 330
 Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro
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<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
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 <212> PRT
 <213> Homo Sapien

<400> 505
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 35 40 45
 Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
 50 55 60
 Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
 65 70 75
 Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
 80 85 90
 Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
 95 100 105
 Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
 110 115 120
 Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

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Val Val Leu Val	Lys 140	Pro Ser Gly Ala	Arg 145	Cys Tyr Val Asp	Gly 150
Ser Glu Glu Ile	Gly 155	Ser Asp Phe Lys	Ile 160	Lys Cys Glu Pro	Lys 165
Glu Gly Ser Leu	Pro 170	Leu Gln Tyr Glu	Trp 175	Gln Lys Leu Ser	Asp 180
Ser Gln Lys Met	Pro 185	Thr Ser Trp Leu	Ala 190	Glu Met Thr Ser	Ser 195
Val Ile Ser Val	Lys 200	Asn Ala Ser Ser	Glu 205	Tyr Ser Gly Thr	Tyr 210
Ser Cys Thr Val	Arg 215	Asn Arg Val Gly	Ser 220	Asp Gln Cys Leu	Leu 225
Arg Leu Asn Val	Val 230	Pro Pro Ser Asn	Lys 235	Ala Gly Leu Ile	Ala 240
Gly Ala Ile Ile	Gly 245	Thr Leu Leu Ala	Leu 250	Ala Leu Ile Gly	Leu 255
Ile Ile Phe Cys	Cys 260	Arg Lys Lys Arg	Arg 265	Glu Glu Lys Tyr	Glu 270
Lys Glu Val His	His 275	Asp Ile Arg Glu	Asp 280	Val Pro Pro Pro	Lys 285
Ser Arg Thr Ser	Thr 290	Ala Arg Ser Tyr	Ile 295	Gly Ser Asn His	Ser 300
Ser Leu Gly Ser	Met 305	Ser Pro Ser Asn	Met 310	Glu Gly Tyr Ser	Lys 315
Thr Gln Tyr Asn	Gln 320	Val Pro Ser Glu	Asp 325	Phe Glu Arg Thr	Pro 330
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<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
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<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
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155

160

165

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170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

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tccacagggtg tccactccca ggtccaactg cacctcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgccctca 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgctctcaga 300
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ccacctgtac acagccacag ccaggaacag ctaccacctg catatccaca 400
agaatggcca tgtggatggc gcaccccatc agacctcta cagtgccttg 450
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gaacgtgctg aagccccggg cccggatgac cccggccccg gcctctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaacca 900
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<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
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Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
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Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	50	55	60
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	65	70	75
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	80	85	90
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	95	100	105
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	110	115	120
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	125	130	135
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	140	145	150
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	155	160	165
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	170	175	180
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	185	190	195
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	200	205	210
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	215	220	225
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	230	235	240
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					245	250	

<210> 512

<211> 2015

<212> DNA

<213> Homo Sapien

<400> 512

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gagcagacac tcgatgaca acggacgaca cagaagtgcc cgctatgact 200

ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250

cttttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

gggtgccttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950
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 gtggcccaaa aaaaa 2015

<210> 513
 <211> 482
 <212> PRT
 <213> Homo Sapien

<400> 513
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 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	260	265	270
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	275	280	285
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	290	295	300
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	305	310	315
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	320	325	330
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	335	340	345
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	350	355	360
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	365	370	375
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	380	385	390
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	395	400	405
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	410	415	420
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	425	430	435
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	440	445	450
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	455	460	465
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Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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gaccaaaact aaactgaaat ttaaatgtt cttcggggga gaaggagcgt 250

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<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

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Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
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His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser
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 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala
 215 220 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala
 230 235 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr
 245 250 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro
 260 265 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr
 275 280 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr
 290 295 300
 Ala Val Leu Thr Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly
 305 310 315
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu
 320 325 330
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 335 340 345
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg
 350 355 360
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn
 365 370 375
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu
 380 385 390
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly
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<210> 516
 <211> 2749
 <212> DNA
 <213> Homo Sapien

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 <222> 1869, 1887
 <223> unknown base

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Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	80	85	90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	95	100	105
Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	110	115	120
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	125	130	135
Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	140	145	150
Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	155	160	165
Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	170	175	180
Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	185	190	195
Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	200	205	210
Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	215	220	225
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	230	235	240
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	245	250	255
Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	260	265	270
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	275	280	285
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	290	295	300
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	305	310	315
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